Montana State Library
3 0864 1004 8856 1

WATER SUPPLY OUTLOOK FOR MONTANA

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

MONTANA AGRICULTURAL EXPERIMENT STATION

AS OF
APR. 1, 1976

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

A57.46/3: April-1976

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: SURVEYOR ENROUTE TO THE MT. BALDY ARIZONA SNOW COURSE
SCS PHOTO AZ-5460

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 111, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P.O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

USDA-SCS-PORTLAND, OREG. 1978

WATER SUPPLY OUTLOOK FOR MONTANA

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

R.M. DAVIS

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D C

Released by

VAN K HADERLIE
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
Bozeman, Montana

In Cooperation with

J. A. ASLESON
DIRECTOR
Montana Agricultural Experiment Station

Report prepared by

PHILLIP E. FARNES, Snow Survey Supervisor
DONALD J. HUFFMAN, Hydrologist
GERALD A. BEARD, Hydrologic Technician
VERA L. CHRISTIE, Clerk/steno

SOIL CONSERVATION SERVICE
P.O Box 98
Bozeman, Montana 59715

USDA-SCS-PORTLAND, OREG. 1978 WTA-L-220248

CONTENTS

Page

MONTANA WATER SUPPLY OUTLOOK 1-2

PROSPECTIVE STREAMFLOW FORECASTS 3

SUMMARY OF SNOW MEASUREMENTS 4

MOUNTAIN SNOW WATER EQUIVALENT 5

SOIL MOISTURE 6

RESERVOIR STORAGE 7

STREAMFLOW FORECASTS 8-14

SNOW 15-20

ISOTOPIC SNOW PROFILE DATA
Noisy Basin 21

SNOW PILLOW DATA

Columbia
Stahl Peak and Grave Creek 22
Poorman Creek and Banfield Mountain 23
Hawkins Lake and Garver Creek 24
Black Pine, Peterson Meadows, and Combination 25
Copper Camp and Copper Bottom 26
North Fork Elk Creek and Lubrecht Flume 27
Twin Lakes, Saddle Mountain, and Twelvemile Creek 28
Noisy Basin and Meadow Creek 29
Hoodoo Basin and Lolo Pass 30
Missouri
Lemhi Ridge and Divide 31
Rocker Peak and Calvert Creek 32
Black Bear and Madison Plateau 33
Whiskey Creek, Tepee Creek, and West Yellowstone 34
Bridger Bowl and Maynard Creek 35
Shower Falls, Carrot Basin, and Lick Creek 36
Spur Park and Deadman Creek 37
Frohner Meadows and Rocky Boy 38
Mount Lockhart and Waldron 39
Fisher Creek, White Mill, and Northeast Entrance 40
Cole Creek 41

MAP, SNOW COURSES, AND RELATED DATA MEASURING SITES

COOPERATORS . . . . . Inside Back Cover

MONTANA WATER SUPPLY OUTLOOK
April 1, 1976

* March was a good snowfall month in most Montana watersheds. Near average water contents were measured over the Kootenai, Lower Clark Fork, Flathead, Marias, Teton, Sun, Dearborn, and St. Mary's River drainages and in the mountains of Central Montana and in the upper part of Red Rock River drainage. Most of the southwestern and southern areas have above average snow cover. Portions of the Bitterroot, Upper Clark Fork, Big Hole, and Yellowstone River headwaters have very heavy snowpack. In general, the higher elevations have the best snow cover percentagewise. This is an ideal situation as the high snow will provide good late season water supplies, and the deficient snow in the lower elevations will help lower the spring runoff.
*
* Streamflow is forecast to be average or above in all drainages except for the Milk River. In this area, reservoir storage and natural runoff should be more than adequate for all needs. Runoff is expected to be well above average in the headwaters area of the Bitterroot, Clark Fork, and Big Hole drainages. Most of the Yellowstone River Basin is forecast to have well above average runoff.

COLUMBIA RIVER DRAINAGE

Snow - Most mountain areas received average or above amounts of snowfall during March. Melt at lower elevations has been negligible. The Flathead, Kootenai, and Lower Clark Fork have near average snowpack increasing to well above average in extreme headwaters of the Clark Fork and along the West side of the Bitterroot drainage. The area West of Kalispell improved but is still somewhat below average.

Streamflow - Spring and summer runoff is forecast near average in the Kootenai, Flathead, and Lower Clark Fork drainages. Well above average flows are expected in the Upper Bitterroot and Upper Clark Fork River drainages. Other streams in the southern half of the area will have above average runoff.

MISSOURI RIVER DRAINAGE

Snow - The pattern of snowfall set earlier in the winter continues. Near average snow water content continues in the head of Red Rock River, in all drainages North of the Dearborn, and in the mountains of Central Montana. Remaining areas have above average snow with well above average amounts in portions of the Big Hole, Madison, and Gallatin drainages in and near Yellowstone National Park. The high elevations continue to show better snow percentagewise than the lower elevations.

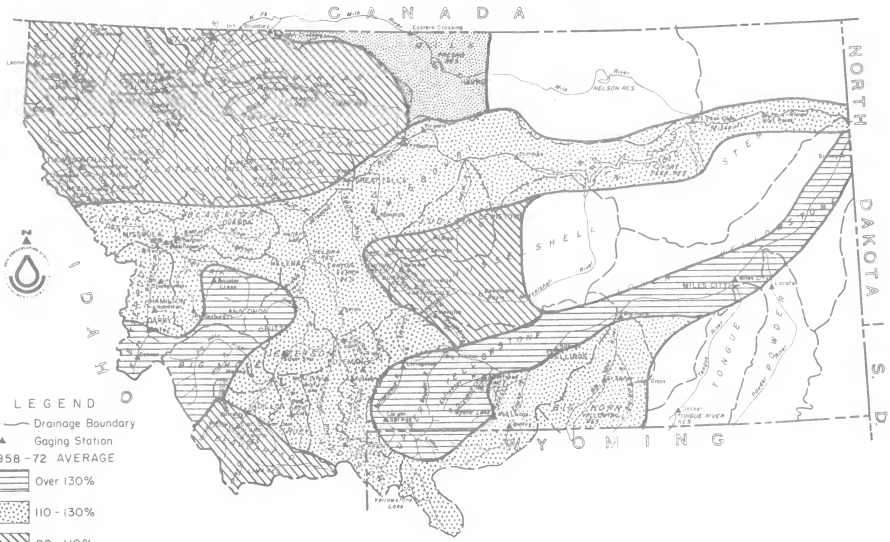
Streamflow - Near average runoff is forecast for the Red Rock, Musselshell, Judith, Marias, Teton, Sun, and St. Mary's Rivers. Below average runoff is expected in the Milk River drainage but current high storage levels in Fresno Reservoir and capability to obtain water from the St. Mary's River will provide adequate water supply for all uses. Most other streams are predicted to have above average runoff. The Big Hole River is forecast well above average.

Late season water supplies should be average or above in most drainages.

YELLOWSTONE RIVER BASIN

Snow - Heavy snowpack in and near Yellowstone National Park continues. The Crazy Mountains and the drainage above Cooney Reservoir have near average snow water content. Other drainages have above average snowpack. Low elevation snow cover is generally near or in some cases below average while higher elevations have a larger snow cover percentagewise. This will provide good late season water supplies.

Streamflow - Streams draining the Absaroka and Beartooth Mountains are forecast to have well above average runoff during the spring and summer months. Other streams tributary to the Yellowstone and Bighorn Rivers are expected to flow above average.



PROSPECTIVE STREAMFLOW FORECASTS
AS OF
APRIL 1, 1976

M7-0-21138A-L

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average
COLUMBIA RIVER DRAINAGE			
Kootenai	34	98	109
Flathead	30	95	102
Upper Clark Fork	32	108	119
Lower Clark Fork	13	101	114
Bitterroot	14	112	128
MISSOURI RIVER DRAINAGE			
Jefferson	48	105	121
Madison	23	113	124
Gallatin	15	104	112
Missouri Main Stem	11	96	105
Judith-Musselshell	17	91	102
Marias-Teton-Sun	12	102	103
Milk	3	71	82
YELLOWSTONE RIVER DRAINAGE			
Yellowstone (above Bighorn)	29	114	122
Bighorn	35	118	122
Little Bighorn	7	92	110
Tongue	12	97	113
Powder	6	124	128
SASKATCHEWAN RIVER DRAINAGE			
Bow	4	131	111

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE

M7-0-21138-L

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average +
COLUMBIA RIVER BASIN							
Kootenai							
Baree Trail	3800	48	7.5	4/01	6.4	6.4	6.4
Murphy Lake R. S.	3000	48	22.6	3/30	19.5	20.2	21.2
Raven	3050	48	23.0	4/01	18.4	17.0	19.2
Flathead							
Desert Mountain	5600	54	8.4	3/30	8.6	6.2	7.6
Marias Pass	5250	54	6.5	3/29	6.2	4.2	5.7
Clark Fork							
Black Pine	7100	48	10.0	3/31	8.1	7.1	7.5
Lubrecht Forest	4100	48	26.8	3/31	23.5	15.7	19.9
Seeley Lake R. S.	4030	48	11.9	4/02	12.4	9.2	9.9
Skalkaho Summit	7260	48	10.8	3/29	9.9	9.5	9.7
Bitterroot							
Gibbons Pass	7100	48	7.1	3/30	5.9	3.6	4.8
Lolo Pass	5250	48	10.6	3/31	7.2	5.1	6.0
MISSOURI RIVER BASIN							
Beaverhead							
Lakeview	6700	48	15.3	3/31	13.9	8.3	9.8
Madison							
West Yellowstone	6700	48	6.5	3/30	1.8	1.8	2.7
Gallatin							
Bridger Bowl	7250	48	17.0	3/29	15.8	15.0	16.0
College Site No. 2	4856	54	17.7	3/31	16.8	15.9	17.0
Lick Creek	6860	48	18.8	3/29	13.9	13.4	16.5
Twenty-One Mile	7150	48	10.0	3/30	3.4	3.1	4.6
Missouri Main Stem							
Kings Hill	7420	48	11.8	4/01	7.1	7.2	6.9
Stemple Pass	6350	48	5.9	3/31	5.3	3.7	4.3
Milk							
Beaver Creek	3950	48	20.9	3/30	9.2	9.1	13.5
Rocky Boy	4700	36	10.1	3/30	7.2	7.7	7.9
Yellowstone							
Battle Ridge	6020	48	17.6	3/30	13.3	14.6	13.8
Northeast Entrance	7350	48	9.4	3/28	4.9	3.8	6.0
PMC Dryland	3700	48	20.7	3/29	7.3	7.4	-

+ Average for period of record.

RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average
COLUMBIA RIVER BASIN					
Kootenai	Koocanusa	5,694.0	1,164.0	768.9	-
Flathead	Hungry Horse	3,428.0	2,245.0	1,793.0	2,157.0
	Flathead Lake	1,791.0	768.3	651.6	794.5
	Camas (4)	45.2	19.7	19.8	27.1
	Mission Valley (8)	100.3	58.1	32.9	38.1
Clark Fork	Georgetown	31.0	26.1	22.4	23.8
	Lower Willow Creek	4.6	3.8	1.8	1.4
	Nevada Creek	12.6	11.9	3.9	7.6
	Noxon Rapids	334.6	172.8	205.0	198.5
Bitterroot	Como	34.9	24.2	6.3	15.8
	Painted Rocks	31.7	31.8	0	20.2
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	328.9	154.6	124.8	145.6
	Lima	84.0	48.9	46.5	38.8
Ruby	Ruby	38.8	31.5	29.8	30.6
Madison	Hebgen Lake	377.5	255.4	247.7	206.3
	Ennis Lake	41.0	34.2	34.4	36.3
Gallatin	Middle Creek	8.0	4.1	4.3	3.9
Missouri	Canyon Ferry	2,043.0	1,552.0	1,323.0	1,561.0
	Hauser & Helena	61.9	62.5	63.0	54.2
	Lake Helena	10.4	10.7	10.9	8.3
	Holter Lake	81.9	78.7	79.9	57.9
	Smith River	10.6	9.2	10.5	7.1
	Bair	7.0	5.6	6.7	5.4
	Martinsdale	23.1	16.2	14.0	7.8
	Deadman's Basin	72.2	53.8	51.4	49.5
	Fort Peck Lake	19,140.0	17,350.0	15,780.0	13,310.0
Sun	Gibson	99.0	70.4	61.7	43.6
	Willow Creek	32.2	28.8	24.4	21.0
	Pishkun	32.0	17.2	16.5	17.2
Marias	Lower Two Medicine	11.9		6.3	
	Four Horns	19.2		14.0	
	Swift	30.0	17.7	11.0	19.7
	Lake Frances	111.9	93.4	31.1	79.3
	Tiber	1,347.0	552.5	486.1	598.9
Milk	Beaver Creek	3.5	2.2	1.5	-
	Fresno	127.2	129.8	77.6	86.5
	Nelson	66.8	48.3	45.6	40.7
	Lake Sherburne	66.2	34.7	19.6	24.7
Yellowstone	Mystic Lake	21.0	2.3	4.0	4.7
	Tongue River	68.0	38.9	49.6	38.4
	Cooney	27.4	11.2	12.2	15.6
Bighorn	Bighorn Lake	1,356.0	784.4	735.0	796.2

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
COLUMBIA RIVER BASIN					
KOOTENAI RIVER					
Libby (near) (2)	7750	104	Apr-Sept	6388	7456
Below Libby Dam	6745	105	Apr-July	5292	6417
	5250	105	Apr-June	3890	5011
FISHER RIVER					
Libby (near)	272	95	Apr-Sept		286
	257	96	Apr-July		269
YAAK RIVER					
Troy (near)	605	107	Apr-Sept		568
	590	108	Apr-July		544
KOOTENAI RIVER					
Leonia (at) (2)	9450	104	Apr-Sept	8093	9073
	8325	105	Apr-July	6846	7957
	6700	104	Apr-June	5298	6431
FLINT CREEK					
Boulder Creek (below) (3)	93.0	130	Apr-Sept		71.6
	75.6	135	Apr-July		56.1
MIDDLE FORK ROCK CREEK					
Philipsburg (near)	91.5	121	Apr-Sept		75.9
	83.3	121	Apr-July		68.6
NEVADA CREEK					
Finn (near)	27.0	125	Apr-Sept		21.6
	25.2	125	Apr-July		20.1
BLACKFOOT RIVER					
Bonner (near)	1330	129	Apr-Sept	1371	1031
	1220	131	Apr-July	1227	934
	1060	130	Apr-June	974	814
CLARK FORK RIVER					
Milltown (above) (4)	1010	127	Apr-Sept	1352	792
	900	130	Apr-July	1133	690
	770	130	Apr-June	858	590
CLARK FORK RIVER					
Missoula (above)	2340	128	Apr-Sept	2722	1823
	2120	131	Apr-July	2360	1624
	1830	130	Apr-June	1832	1404
INFLOW LOWER WILLOW CREEK RESERVOIR					
Hall (near)	21.8	135	Apr-Sept	28.0	16.2
	21.0	136	Apr-July	26.2	15.4

(2) Adjusted for storage in Lake Koocanusa.
(3) Sum Flint Creek at Maxville and Boulder Creek at Maxville.
(4) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
WEST FORK BITTERROOT RIVER					
Conner (near) (5)	245	142	Apr-Sept		172
	225	144	Apr-July		156
BITTERROOT RIVER					
Darby (near)	770	132	Apr-Sept	736	584
	720	133	Apr-July	662	542
	640	134	Apr-June	502	479
SKALKAHO CREEK					
Hamilton (near)	69.5	123	Apr-Sept		56.6
	62.0	125	Apr-July		49.6
BURNT FORK CREEK					
Stevensville (near) (10)	45.5	129	Apr-Sept		35.3
	40.0	129	Apr-July		31.0
BITTERROOT RIVER					
Missoula (at) (6)	2000	131	Apr-Sept		1527
	1870	132	Apr-July		1412
	1600	129	Apr-June		1236
CLARK FORK RIVER					
Missoula (below)	4340	130	Apr-Sept		3350
	3990	131	Apr-July		3036
	3430	130	Apr-June		2640
CLARK FORK RIVER					
St. Regis (at)	5650	125	Apr-Sept	5750	4507
	5150	126	Apr-July	5035	4087
	4500	126	Apr-June	3805	3563
NORTH FORK FLATHEAD RIVER					
Columbia Falls (near)	1950	98	Apr-Sept		1991
	1800	99	Apr-July		1813
	1550	100	Apr-June		1551
MIDDLE FORK FLATHEAD RIVER					
West Glacier (near)	2000	104	Apr-Sept	2330	1917
	1850	105	Apr-July	2136	1768
	1570	104	Apr-June	1687	1514
SOUTH FORK FLATHEAD RIVER					
Columbia Falls (near) (7)	2500	105	Apr-Sept	2520	2378
	2350	105	Apr-July	2338	2240
	2050	103	Apr-June	1856	1984

(5) Adjusted for storage in Painted Rocks Reservoir.
(6) Difference in observed flow Clark Fork above and below Missoula.
(7) Adjusted for storage in Hungry Horse Reservoir.
(10) Adjusted for diversion into Sunset Highline Canal.

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
FLATHEAD RIVER					
Columbia Falls (at) (7)	6600	103	Apr-Sept	6794	6421
	6150	104	Apr-July	6346	5942
	5350	104	Apr-June	5041	5151
SWAN RIVER					
Big Fork (near)	755	105	Apr-Sept		717
	673	107	Apr-July		630
FLATHEAD RIVER					
Polson (near) (8)	7900	103	Apr-Sept	7895	7648
	7370	104	Apr-July	7142	7082
	6300	103	Apr-June	5631	6113
CLARK FORK RIVER					
Plains (near) (8)	14400	114	Apr-Sept	14101	12601
	13070	113	Apr-July	12542	11523
	11200	113	Apr-June	9669	9934
THOMPSON RIVER					
Thompson Falls (near)	300	108	Apr-Sept		277
	270	109	Apr-July		248
PROSPECT CREEK					
Thompson Falls (at)	160	109	Apr-Sept		147
	150	109	Apr-July		137
CLARK FORK RIVER					
Whitehorse Rapids (at) (9)	15900	113	Apr-Sept		14336
	14570	113	Apr-July		13086
	12400	112	Apr-June		11325

(7) Adjusted for storage in Hungry Horse Reservoir.
(8) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.
(9) Adjusted for storage in Hungry Horse, Flathead Lake, and Noxon Rapids Reservoirs.

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
MISSOURI RIVER BASIN					
BEAVERHEAD RIVER					
Grant (near) (11) (12)	147	101	Apr-Sept	295	145
	130	102	Apr-July	248	127
RUBY RIVER					
Alder (near)	106	113	Apr-Sept		93.9
	91	115	Apr-July		79.4
BIG HOLE RIVER					
Melrose (near)	990	132	Apr-Sept		748
	913	132	Apr-July		694
BIRCH CREEK					
Glen (near)	17.3	126	Apr-Sept		13.7
	14.5	126	Apr-July		11.5
BOULDER RIVER					
Boulder (near)	116	130	Apr-Sept	184	89.5
	111	130	Apr-July	170	85.3
WILLOW CREEK					
Harrison (near)	23.8	126	Apr-Sept		18.9
	21.5	126	Apr-July		17.1
MADISON RIVER					
Grayling (near) (13)	590	123	Apr-Sept	529	480
	470	126	Apr-July	410	374
MADISON RIVER					
McAllister (near) (14)	1020	123	Apr-Sept	998	828
	820	126	Apr-July	792	652
GALLATIN RIVER					
Gateway (near)	635	120	Apr-Sept		531
	550	122	Apr-July		451

(11) Adjusted for storage in Lima Reservoir.
(12) Adjusted for storage in Clark Canyon Reservoir.
(13) Adjusted for storage in Hebgen Lake.
(14) Adjusted for storage in Hebgen and Ennis Lakes.

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
HYALITE CREEK					
Bozeman (near) (15)	52.5	119	Apr-Sept		44.2
	46.0	120	Apr-July		38.2
GALLATIN RIVER					
Logan (at)	735	128	Apr-Sept		573
	640	131	Apr-July		487
MISSOURI RIVER					
Toston (at) (16)	3100	127	Apr-Sept	3875	2432
	2710	128	Apr-July	3280	2109
SHEEP CREEK					
White Sulphur Springs (near)	22.5	109	Apr-Sept	28.6	20.6
	19.5	108	Apr-July	24.9	18.0
SUN RIVER					
Gibson Dam (at) (17)	620	105	Apr-Sept	829	590
	572	106	Apr-July	764	541
BELT CREEK					
Monarch (near)	150	122	Apr-Sept		123
	138	122	Apr-July		113
MISSOURI RIVER					
Fort Benton (at) (18)	4500	122	Apr-Sept		3690
	3880	124	Apr-July		3123
TWO MEDICINE CREEK					
Browning (near) (19)	260	103	Apr-Sept		253
	250	104	Apr-July		240
BADGER CREEK					
Browning (near)	136	105	Apr-Sept		130
	118	104	Apr-July		113
MARIAS RIVER					
Shelby (near) (20)	570	102	Apr-Sept	1216	559
	550	102	Apr-July	1138	538

(15) Adjusted for storage in Middle Creek Reservoir.
(16) Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.
(17) Adjusted for storage in Gibson Reservoir and diversions.
(18) Adjusted for storage in Canyon Ferry Reservoir.
(19) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.
(20) Adjusted for storage in Two Medicine, Four Horns, Lake Frances, and Swift Reservoirs.

Average based on 1958-72 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
MISSOURI RIVER					
Virgelle (at) (21)	5200	120	Apr-Sept		4342
	4500	120	Apr-July		3742
SOUTH FORK JUDITH RIVER					
Utica (near)	15.0	101	Apr-Sept		14.9
	13.9	101	Apr-July		13.7
MISSOURI RIVER					
Landusky (near) (21)	5500	116	Apr-Sept		4739
	4800	118	Apr-July		4068
NORTH FORK MUSSELSHELL RIVER					
Delpine (near)	6.2	100	Apr-Sept		6.2
	5.4	100	Apr-July		5.4
SOUTH FORK MUSSELSHELL RIVER					
Martinsdale (above)	54.0	108	Apr-Sept		50.1
	52.0	110	Apr-July		47.3
MISSOURI RIVER					
Fort Peck Dam (below) (22)	5400	117	Apr-Sept		4598
	4800	118	Apr-July		4069
MILK RIVER					
Eastern Crossing (at)	230	88	Apr-Sept		260
MISSOURI RIVER					
Wolf Point (near) (22)	5800	118	Apr-Sept		4898
	5200	119	Apr-July		4361
MISSOURI RIVER					
Williston, N.D. (near) (29)	15000	128	Apr-Sept		11778
	13400	128	Apr-July		10437
SASKATCHEWAN RIVER BASIN					
ST. MARY RIVER					
Babb (near) (30)	505	103	Apr-Sept		489
	440	105	Apr-July		421

(21) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.
(22) Adjusted for storage in Canyon Ferry, Tiber, and Fort Peck Reservoirs.
(29) Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill, Boysen, and Yellowtail Reservoirs. Sum Yellowstone River near Sidney and Missouri River near Culbertson.
(30) Adjusted for storage in Lake Sherburne.

Average based on 1958-72 period.

STREAMFLOW FORECASTS	THIS YEAR			PAST RECORD	
	FORECAST			THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	FORECAST PERIOD	Last Year	Average
YELLOWSTONE RIVER BASIN					
YELLOWSTONE RIVER					
Corwin Springs (at)	2660	133	Apr-Sept	2159	1996
	2250	135	Apr-July	1741	1662
YELLOWSTONE RIVER					
Livingston (near)	3150	136	Apr-Sept		2317
	2650	138	Apr-July		1926
BOULDER RIVER					
Big Timber (at)	515	136	Apr-Sept		379
	482	138	Apr-July		350
STILLWATER RIVER					
Absarokee (near) (25)	770	130	Apr-Sept		591
	650	132	Apr-July		494
CLARKS FORK RIVER					
Belfry (near)	775	128	Apr-Sept		607
	692	127	Apr-July		546
ROCK CREEK					
Red Lodge (near)	148	135	Apr-Sept	140	110
	113	135	Apr-July	111	84.0
INFLOW COONEY RESERVOIR					
Boyd (near)	60.0	117	Apr-Sept		51.5
	48.4	118	Apr-July		41.1
YELLOWSTONE RIVER					
Billings (at)	5800	136	Apr-Sept	6472	4246
	4990	138	Apr-July	5608	3613
BIGHORN RIVER					
St. Xavier (near) (26)	2370	128	Apr-Sept	2497	1849
	2200	129	Apr-July	2366	1706
LITTLE BIGHORN RIVER					
Lodgegrass (near) (28)	170	116	Apr-Sept		146
	150	116	Apr-July		129
YELLOWSTONE RIVER					
Miles City (at) (27)	8300	130	Apr-Sept		6378
	7400	133	Apr-July		5555
YELLOWSTONE RIVER					
Sidney (near) (27)	8800	132	Apr-Sept		6665
	7900	134	Apr-July		5895

(25) Adjusted for storage in Mystic Lake.
(26) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake, and Yellowtail Reservoirs.
(27) Adjusted for storage in Buffalo Bill, Boysen, and Yellowtail Reservoirs.
(28) Sum Little Bighorn below Pass Creek and Lodgegrass Creek near Wyola.

Average based on 1958-72 period.

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR Date of Survey	Snow Depth (Inches)	Water Content (Inches)	PAST RECORD Water Content (inches) Last Year	Average
ABUNDANCE LAKE	8800	3/29	83	30.0	21.2	20.9
AMBROSE	6480	4/01	52	17.2	15.3	13.8
ARCH FALLS	7350	3/29	53	16.4	16.6	14.0
BADGER PASS	6900	3/31	118	48.4	44.0	42.0
BALD EAGLE PEAK	5700	3/31	170	67.9	70.2	68.0
BALD RIDGE	7500	3/30	47	15.3	17.4	14.0
BANFIELD MOUNTAIN	3600	4/01	80	27.4	30.0	25.5
BANFIELD MOUNTAIN PILLOW	3600	4/01	SP	25.0	27.1	21.8
BAREE CREEK	5500	4/01	147	59.8	59.1	49.4
BAREE MIDWAY	4600	3/31	121	45.0	49.8	37.7
BAREE TRAIL	3800	4/01	36	14.3	15.3	9.6
BASIN CREEK	7180	3/26	44	11.8	-	-
BASSOO PEAK	5150	4/01	33	10.1	16.4	12.0
BATTLE RIDGE	6020	3/30	20	6.5	10.9	7.4
BEAR BASIN	8150	3/31	71	27.0	24.8	22.4
BEAR PAW SKI AREA	5200	3/29	18	5.0	8.6	6.3
BEAVER LAKE	5900	3/31	76	27.6	27.4	25.1
BERRY MEADOW	7000	3/29	33	9.7	9.0	8.3
BIG COULEE	5100	3/29	16	4.9	8.4	-
BIG CREEK	6750	3/31	116	44.5	43.5	49.7
BIG SKY	7700	3/30	60	19.7	17.6	17.3
BIG SKY MEADOW	6350	3/31	41	13.3	13.0	9.0
BIG SNOWY	7150	4/02	58	19.6	25.8	19.9
BLACK BEAR	7950	3/30	128	53.0	43.4	-
BLACK BEAR PILLOW	7950	3/30	SP	44.7	38.0	-
BLACK MOUNTAIN	7750	3/31	62	20.4	-	-
BLACK PINE	7100	3/31	54	19.0	14.6	14.0
BLACK PINE PILLOW	7100	3/31	SP	21.1	16.0	14.2
BLOODY DICK	7600	3/31	56	19.8	17.0	14.0
BLUE LAKE	5900	3/31	80	30.0	30.0	28.2
BOTS SOTS	8000	4/01	32	8.3	11.0	-
BOULDER MOUNTAIN	7950	3/29	72	25.5	21.1	19.5
BOX CANYON	6670	4/02	52	18.5	-	-
BOXELDER CREEK	5100	3/29	30	7.4	10.5	-
BRANHAM LAKES	8850	3/30	91	35.4	30.8	31.6
BRIDGER BOWL	7250	3/30	82	30.2	26.7	30.8
BRIDGER BOWL PILLOW	7250	3/30	SP	30.1	25.3	29.6
BRISTOW CREEK	3900	4/01	37	13.3	17.3	13.4
BRUSH CREEK TIMBER	5000	3/30	35	10.8	12.6	10.9
BULL MOUNTAIN	6600	3/31	23	7.9	8.6	-
CABIN CREEK	5200	3/29	19	5.7	7.0	7.4
CALL ROAD	8050	3/29	50	14.5	14.5	12.2
CALVERT CREEK	6450	4/01	49	14.2	13.4	10.6
CALVERT CREEK PILLOW	6450	4/03	30	8.1	-	-
CAMP MISERY	6400	3/29	124	46.9	52.2	49.6
CAMP SENIA	7890	4/01	28	7.3	9.2	7.2
CANYON (WY)	7750	4/01	63	21.7	14.4	16.5
CARROT BASIN	9000	3/30	106	39.6	41.2	38.1

Average based On 1958-72 period. A - Aerial observation; water content estimated.
SP - Snow Pillow observation; water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR: Date of Survey	THIS YEAR: Snow Depth (inches)	THIS YEAR: Water Content (inches)	PAST RECORD: Water Content (inches): Last Year	PAST RECORD: Water Content (inches): Average
CARROT BASIN PILLOW	9000	3/30	SP	31.6	27.0	28.6
CARTER CREEK	7400	4/03	30	8.1	6.3	6.4
CEDAR GROVE	4100	3/31	45	15.7	17.5	12.7
CHESSMAN RESERVOIR	6200	3/31	11	3.0	7.4	3.3
CLOVER MEADOW	8600	3/29	71	22.2	21.2	18.7
COLE CREEK	7850	3/31	62	20.4	19.6	-
COLE CREEK PILLOW	7850	3/31	SP	18.7	19.5	-
COLLEY CREEK	6300	4/01	35	10.8	11.9	-
COMBINATION	5600	3/31	27	7.8	7.4	8.1
COMBINATION PILLOW	5600	3/31	SP	8.0	8.1	-
COOKE STATION	8150	4/01	72	27.4	20.7	20.5
COPPER BOTTOM	5200	4/01	37	12.8	11.1	11.8
COPPER BOTTOM PILLOW	5200	4/01	0	15.5	-	-
COPPER CAMP	6950	4/01	93	37.4	30.7	35.6
COPPER CAMP PILLOW	6950	4/01	0	45.4	-	-
COPPER CREEK	5700	4/01	46	16.0	16.2	16.3
COPPER LAKE CREEK	6100	4/01	73	27.0	26.3	25.7
COPPER MOUNTAIN	7700	4/02	47	14.4	15.5	12.3
COTTONWOOD CREEK	6400	3/25	39	11.9	9.6	-
COYOTE HILL	4200	3/31	34	12.1	14.5	10.5
CREVICE MOUNTAIN	8400	3/30	50	14.1	12.4	10.6
CRYSTAL LAKE	6100	4/02	42	12.6	17.5	14.5
DAD CREEK LAKE	8400	3/29	66	19.8	16.0	15.3
DAISY PEAK	7600	3/30	48	14.3	12.9	11.6
DALY CREEK	5780	3/29	55	16.7	13.8	-
DARKHORSE LAKE	8600	3/29	96	38.2	35.2	28.0
DAVIS CREEK	5400	4/02	80	28.1	29.9	26.5
DEADMAN CREEK	6450	4/01	34	10.6	13.6	12.7
DEADMAN CREEK PILLOW	6450	4/01	SP	9.4	12.0	11.0
DESERT MOUNTAIN	5600	3/31	49	16.6	17.3	17.2
DEVILS SLIDE	8100	3/29	78	27.6	24.1	24.7
DISCOVERY BASIN	7050	3/31	43	13.8	12.8	-
DIVIDE	7800	3/29	40	10.6	13.6	11.6
DIVIDE PILLOW	7800	3/29	0	9.9	-	-
DIX HILL	6400	4/03	36	12.2	11.8	-
EAGLE CREEK	7000	3/28	56	18.7	18.8	14.9
EAST BOULDER S	9250	4/01	98	39.0A	35.5	-
EAST FORK R.S.	5400	3/29	29	8.2	8.7	6.7
EL DORADO MINE	7800	3/29	97	31.4	22.4	23.1
ELK HORN SPRINGS	7800	3/29	45	12.3	10.8	9.7
ELK PEAK	8000	4/02	58	19.5	20.4	19.2
EMERY CREEK	4350	3/31	51	17.7	-	-
FATTY CREEK	5500	3/31	73	24.9	26.8	24.8
FISH CREEK	8000	3/26	47	13.3	-	-
FISHER CREEK	9100	4/01	120	49.2	40.2	38.5
FISHER CREEK PILLOW	9100	4/01	SP	45.4	39.0	35.0
FIVE-BULL	5700	3/31	15	4.6	10.2	7.5
FLEECER RIDGE	7500	3/31	50	14.4	13.0	-
FOOLHEN	8280	3/29	72	23.8	18.2	18.2
FOREST LAKE	6400	3/28	47	15.0	17.0	12.7

Average based On 1958-72 period. A - Aeriol observation; water content estimated.
SP - Snow Pillow observation; water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR Date of Survey	Snow Depth (Inches)	Water Content (Inches)	PAST RECORD Water Content (inches) Last Year	Average
FOUR MILE	6900	3/29	40	11.5	9.7	9.1
FRED BURR PASS	8000	3/30	96	34.7	25.3	28.2
FREIGHT CREEK	6000	3/31	47	17.4	18.0	16.8
FROHNER MEADOWS	6480	3/30	32	9.4	9.8	-
FROHNER MEADOWS PILLOW	6480	3/30	SP	9.4	10.5	-
GARVER CREEK	4250	4/02	32	10.5	14.8	12.8
GARVER CREEK PILLOW	4250	4/02	SP	10.4	13.0	10.4
GIBBONS PASS	7100	3/25	83	29.1	28.6	23.7
GOAT MOUNTAIN	7000	4/02	42	13.6	10.4	11.8
GOLD STONE	8100	3/31	68	24.7	21.2	17.9
GRASSHOPPER	7000	4/02	20	5.1	7.6	5.9
GRAVE CREEK	4300	3/29	58	19.2	20.1	19.4
GRAVE CREEK PILLOW	4300	3/27	0	19.8	-	-
GRIFFIN CREEK DIVIDE	5150	3/31	35	11.0	16.8	12.4
GRIZZLY PEAK	8400	3/31	55	18.0	17.0	17.5
GUNSIGHT LAKE	6300	3/31	120	43.5	47.3	42.9
HAND CREEK	3030	3/30	44	13.5	-	-
HAWKINS LAKE	6450	4/02	107	41.3	36.6	32.8
HAWKINS LAKE PILLOW	6450	4/02	SP	37.2	33.3	30.4
HAYMAKER	8050	3/29	48	14.2	15.9	13.6
HEART LAKE TRAIL	4800	4/02	77	30.0	28.7	23.4
HEBGEN DAM	6550	3/31	46	16.8	15.6	11.6
HELL ROARING DIVIDE	5770	4/02	87	31.9	36.7	34.0
HIGHWOOD DIVIDE	5650	3/29	31	10.9	11.0	-
HIGHWOOD STATION	4600	3/29	0	.0	7.0	-
HOLBROOK	4530	3/29	34	10.7	11.6	10.5
HOOD MEADOW	6600	3/29	46	13.8	14.2	12.0
HOODOO BASIN	6000	4/02	154	62.7	56.8	53.8
HOODOO BASIN PILLOW	6000	4/01	SP	54.7	51.9	53.3
HOODOO CREEK	5900	4/02	146	58.4	51.8	50.3
INDEPENDENCE	7850	4/02	67	25.8	22.8	19.1
INTERGAARD	6450	4/01	44	13.7	10.9	9.2
ISLAND PARK (ID)	6310	3/31	60	21.5	20.8	16.4
JACK CREEK	7500	3/30	30	8.1	7.7	6.1
JAHNKE LAKE TRAIL	7200	3/31	47	14.8	13.1	9.7
JOHNSON PARK	6450	3/30	28	8.0	9.2	7.2
KING CREEK SADDLE	4550	3/26	0	.0	5.1	-
KING SPRINGS	4150	3/26	0	.0	4.0	-
KINGS HILL	7500	3/29	51	16.5	16.2	15.2
KISHENEHN	3890	3/28	27	7.7	10.5	8.4
KIT CARSON (ID)	5020	3/29	42	12.9	13.8	9.1
KIWANIS CAMP	5720	3/29	0	.0	3.9	-
LAKE CAMP (WY)	7850	3/31	45	12.7	9.3	9.9
LAKE CREEK	6100	4/02	33	10.6	11.2	7.5
LAKEVIEW CANYON	6930	3/31	44	12.4	16.2	13.6
LAKEVIEW RIDGE	7400	3/31	39	11.7	14.2	11.5
LATHAM SPRINGS (ID)	7650	3/31	106	44.4	37.4	32.6
LEMHI PASS	7480	3/29	45	13.6	12.0	9.2
LEMHI RIDGE	8100	3/29	50	15.5	14.6	10.4
LEMHI RIDGE PILLOW	8100	3/29	0	16.4	-	-

Average based On 1958-72 period. A - Aerial observation; water content estimated.
SP - Snow Pillow observation; water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR: Date of Survey	THIS YEAR: Snow Depth (Inches)	THIS YEAR: Water Content (Inches)	PAST RECORD: Water Content (Inches): Last Year	PAST RECORD: Water Content (Inches): Average
LICK CREEK	6860	3/29	46	12.6	13.1	10.6
LICK CREEK PILLOW	6860	3/29	SP	11.3	13.0	10.6
LITTLE PARK	7400	3/31	61	21.2	18.8	17.0
LOGAN CREEK	4300	3/30	25	7.5	10.4	8.0
LOLO PASS (ID)	5230	3/29	108	38.1	34.8	32.9
LOLO PASS PILLOW	5230	4/01	0	31.4	-	-
LONE MOUNTAIN	8880	3/30	82	30.1	25.4	25.1
LOST HORSE	5940	3/31	120	48.3	38.2	33.7
LOST SOUL	4800	4/01	54	18.4	20.9	17.2
LOWER TWIN	7900	3/29	73	25.8	24.0	22.5
LUBRECHT FLUME	4800	3/31	22	8.6	9.0	5.1
LUBRECHT FOREST # 3	5450	3/31	27	8.2	10.1	7.4
LUBRECHT FOREST # 4	4650	3/31	4	1.9	4.7	2.8
LUBRECHT FOREST # 6	4040	3/31	5	2.3	6.0	2.8
LUBRECHT HYDROPLOT	4200	3/31	15	6.2	8.2	3.2
LUPINE CREEK (WY)	7300	4/01	47	14.5	11.7	10.3
MADISON PLATEAU	7750	3/30	84	31.8	26.1	22.3
MADISON PLATEAU PILLOW	7750	3/30	SP	31.2	25.0	23.2
MARIAS PASS	5250	4/01	51	18.0	20.6	19.6
MAYNARD CREEK	6210	3/30	52	17.2	17.0	19.4
MAYNARD CREEK PILLOW	6210	3/30	SP	10.2	13.7	12.7
MIDDLE MILL CREEK	7850	3/30	56	18.5	20.8	16.6
MILL CREEK	7500	4/01	50	15.7	18.8	14.3
MINERAL CREEK	4000	3/30	61	21.1	21.5	20.0
MISSION MOUNTAIN	5050	3/26	0	.0	6.0	-
MONUMENT PEAK	8800	4/02	96	38.0	30.6	27.8
MOUNT LOCKHART	6400	4/04	75	28.8	23.2	25.0
MOUNT LOCKHART PILLOW	6400	4/04	SP	25.3	-	22.5
MUDD LAKE	7650	4/01	67	23.7	22.6	23.0
NEW WORLD	6900	3/30	58	19.4	17.4	16.3
NEZ PERCE CAMP	3580	3/29	57	16.9	19.8	15.3
NEZ PERCE CREEK	6500	4/02	28	8.6	10.1	6.8
NEZ PERCE PASS	6570	3/29	72	24.6	24.1	17.3
NOISY BASIN	6040	3/29	123	45.9	48.6	-
NOISY BASIN PILLOW	6040	3/29	SP	38.2	40.3	-
NOISY CREEK	3600	3/29	11	3.3	7.1	-
NORRIS BASIN (WY)	7500	3/30	48	15.5	12.6	11.0
NORTH FK. ELK CREEK	6250	4/01	46	15.2	16.2	12.7
NORTH FK. ELK CREEK PILL	6250	4/01	SP	16.5	16.6	13.1
NORTH FORK JOCKO	6330	3/31	139	53.1	52.1	49.6
NORTH MEADOW	7500	3/29	40	11.1	10.2	9.2
NORTHEAST ENTRANCE	7400	3/28	45	15.2	13.4	9.5
NORTHEAST ENTRANCE PILL.	7400	3/28	SP	13.5	10.6	9.3
NOTCH	8500	3/29	57	16.0	20.4	16.3
OLD FAITHFUL(WY)	7360	3/31	62	22.0	9.0	-
OPHIR PARK	7150	4/03	68	25.2	19.2	-
PALISADE CREEK	8250	4/01	91	35.4	30.0	31.4
PETERSON MEADOWS	7200	3/29	52	16.2	12.2	10.1
PETERSON MEADOWS PILLOW	7200	3/29	SP	15.9	12.0	-
PICKET PIN D	9450	4/01	85	33.0A	33.0	-

Average based On 1958-72 period. A - Aeriol observation; water content estimated.
SP - Snow Pillow observation; water content only.

SNOW

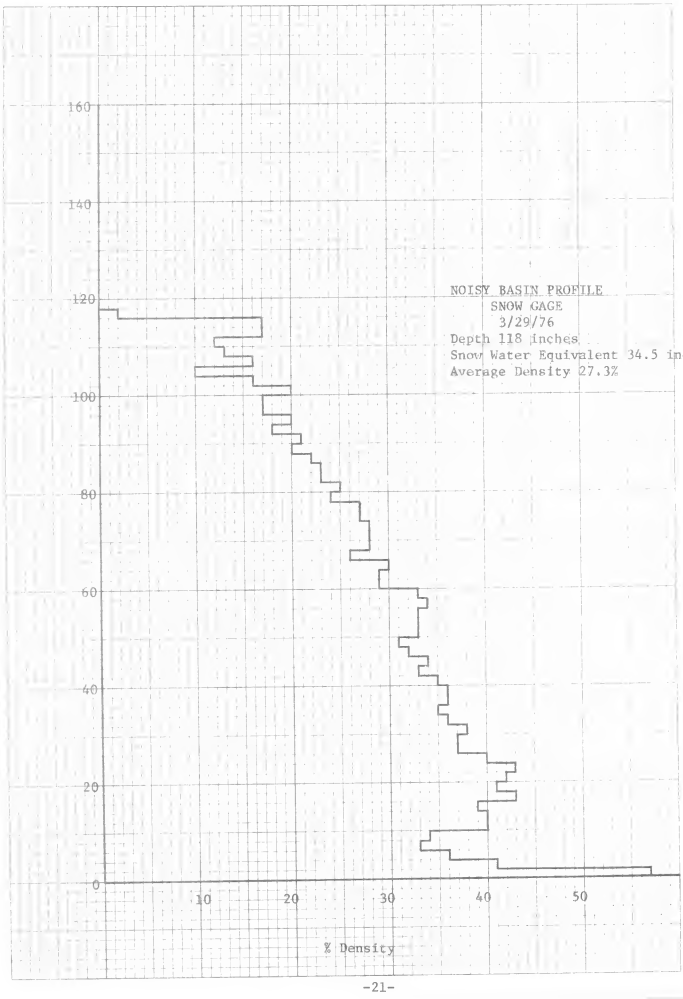
DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR Date of Survey	Snow Depth (Inches)	Water Content (Inches)	PAST RECORD Water Content (inches) Last Year	Average
PICKET PIN LOWER	6200	3/30	13	4.3	7.0	-
PICKET PIN MIDDLE	7250	3/30	54	21.5	24.0	-
PICKET PIN UPPER	8100	3/30	72	27.6	25.6	-
PICNIC GROUNDS	6200	3/31	19	6.1	5.7	4.6
PIPESTONE PASS	7200	3/31	30	8.7	9.0	6.2
PLACER BASIN F	8800	4/01	67	25.5A	27.0	-
POORMAN CREEK	5100	3/31	101	39.3	41.3	38.0
POORMAN CREEK PILLOW	5100	3/31	SP	38.4	42.1	32.1
PORCUPINE R.S.	6500	3/30	29	8.8	11.2	8.1
POTOMAGETON PARK	7150	3/29	53	18.0	17.4	15.3
RED MOUNTAIN	6000	3/30	66	22.1	25.7	20.1
ROCK CREEK	5600	4/02	29	9.2	13.8	10.2
ROCK CREEK MEADOWS	8160	4/02	84	27.8	-	-
ROCKER PEAK	8000	3/29	61	20.4	15.4	16.7
ROCKER PEAK PILLOW	8000	3/29	SP	19.1	15.7	16.7
ROCKY BOY	4700	3/29	7	2.2	6.5	4.7
ROCKY BOY PILLOW	4700	3/29	SP	3.9	6.6	5.1
SACAJAWEA	6550	3/30	49	17.1	18.0	15.3
SADDLE MOUNTAIN	7940	3/30	93	33.8	30.3	26.4
SADDLE MOUNTAIN PILLOW	7940	3/30	SP	32.8	30.7	28.2
SAWTELL MOUNTAIN (ID)	8710	3/31	98	36.8	35.2	35.3
SENTINEL CREEK	8300	4/01	72	27.3	25.6	24.6
SHOWER FALLS	8100	3/29	84	30.1	29.3	26.1
SHOWER FALLS PILLOW	8100	3/29	SP	28.3	29.3	26.3
SILVER RUN	6630	3/31	25	6.4	7.4	-
SKALKAHO SUMMIT	7260	3/29	93	35.2	31.2	27.4
SLAG-A-MELT LAKE	8750	3/29	94	35.6	30.6	27.8
SLIDE ROCK MOUNTAIN	7100	3/30	73	25.0	18.4	18.0
SMUGGLER MINE	6960	3/30	36	9.9	13.8	11.1
SOUTH FORK SHIELDS	8100	3/30	75	26.9	28.6	26.1
SPOTTED BEAR MOUNTAIN	7000	3/31	49	17.6	17.2	15.8
SPUR PARK	8000	4/01	62	23.2	22.3	23.8
SPUR PARK PILLOW	8100	4/01	SP	23.6	25.5	23.5
STAHL PEAK	6050	4/04	104	41.3	39.8	41.4
STAR LAKE E	9650	4/01	123	50.5A	44.0	-
STEMPLE PASS	6600	4/01	46	13.6	14.0	11.4
STORM LAKE	7780	3/29	63	20.9	14.0	15.0
STUART MILL	6500	4/01	33	9.3	9.9	7.5
STUART MOUNTAIN	7400	4/04	104	41.3	36.4	34.2
SUCKER CREEK	3960	3/29	0	.0	1.2	-
SUGARLOAF	7350	3/25	41	13.4	11.9	-
SYLVAN PASS (WY)	7100	3/31	60	21.3	14.1	13.8
TARGHEE PASS (ID)	7000	3/31	55	19.3	17.5	16.2
TAYLOR ROAD	4080	3/29	0	.0	5.9	-
TEN MILE MIDDLE	6800	3/31	49	16.3	15.6	12.6
TEN MILE UPPER	8000	3/31	56	18.9	16.5	15.0
TEPEE CREEK	8000	4/02	63	19.0	19.8	16.4
TEPEE CREEK PILLOW	8000	4/02	SP	15.0	15.8	-
THUMB DIVIDE (WY)	7900	3/29	77	24.8	17.9	22.2
TIMBERLINE CREEK	8850	4/01	58	18.2	16.9	16.1
TEN MILE LOWER	6600	3/31	28	8.9		

Average based On 1958-72 period. A - Aerial observation; water content estimated.
SP - Snow Pillow observation; water content only.

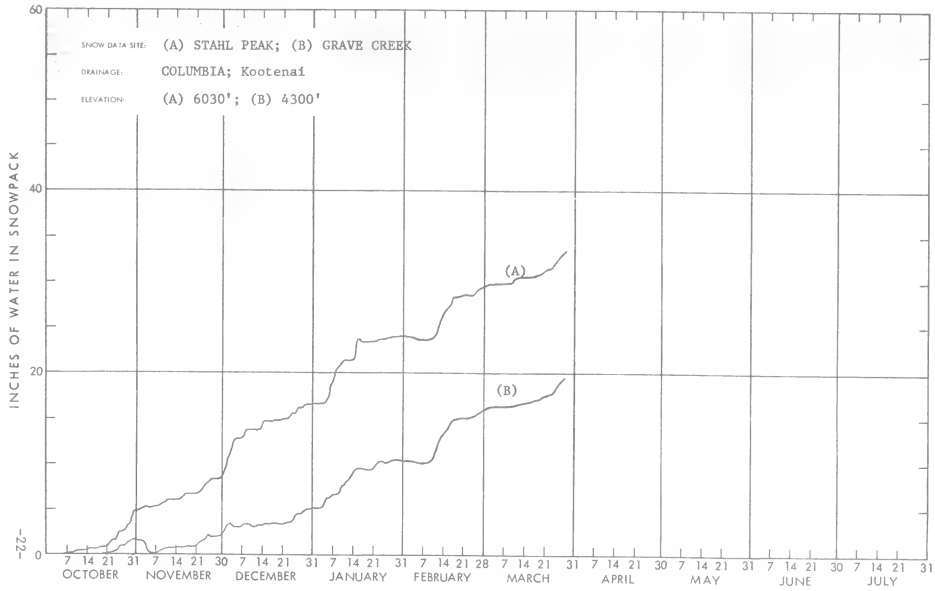
SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR Date of Survey	Snow Depth (Inches)	Water Content (Inches)	PAST RECORD Water Content (inches) Last Year	Average
TRAIL CREEK	7090	3/29	42	12.8	11.6	9.0
TRINKUS LAKE	6100	3/31	110	43.1	49.7	46.5
TV MOUNTAIN	6800	4/03	68	23.0	22.0	20.3
TWELVEMILE CREEK	5600	3/31	82	31.6	26.0	21.1
TWELVEMILL CREEK PILLOW	5600	3/31	SP	26.3	22.7	18.6
TWENTY-ONE MILE	7150	4/01	61	24.8	20.3	17.9
TWIN CREEKS	3580	3/31	37	13.5	16.0	11.7
TWIN LAKES	6510	3/31	141	57.8	46.8	43.7
TWIN LAKES PILLOW	6400	3/31	SP	55.1	47.3	42.7
UPPER HOLLAND LAKE	6200	3/31	109	42.8	40.1	38.3
VALLEY VIEW (ID)	6500	3/31	58	21.6	19.2	17.7
WALDRON	5600	4/04	29	10.4	11.8	12.2
WALDRON PILLOW	5600	4/04	SP	8.4	9.0	12.1
WEASEL DIVIDE	5450	3/29	113	39.6	38.0	36.4
WEST ROSEBUD	7500	3/25	52	16.6	14.2	12.4
WEST YELLOWSTONE	6700	3/31	51	17.7	11.8	11.4
WEST YELLOWSTONE PILLOW	6700	3/30	SP	12.7	8.9	8.8
WHISKEY CREEK	6800	3/31	74	28.4	23.4	22.1
WHISKEY CREEK PILLOW	6800	3/31	SP	22.9	17.6	-
WHITE ELEPHANT (ID)	7700	3/31	81	30.4	27.7	-
WHITE MILL	8700	4/01	93	36.2	28.7	27.7
WHITE MILL PILLOW	8700	4/01	SP	31.9	26.2	-
WHITE PINE RIDGE	8850	3/29	34	7.2	5.9	5.7
WILLOW CREEK	6500	3/31	38	11.0	9.2	-
WOLVERINE (WY)	7650	3/31	56	18.6	15.2	-
WRONG CREEK	5700	3/31	46	14.2	15.6	16.2
WRONG RIDGE	6800	3/31	66	24.2	19.9	22.0
LATE ARRIVING DATA						
BEAR MOUNTAIN (ID)	5400	4/06	171	70.8	70.2	65.7
HALVERSON CREEK (ID)	4850	4/06	141	59.1	53.6	50.7
KEELER CREEK	3300	4/06	35	15.3	20.3	11.1

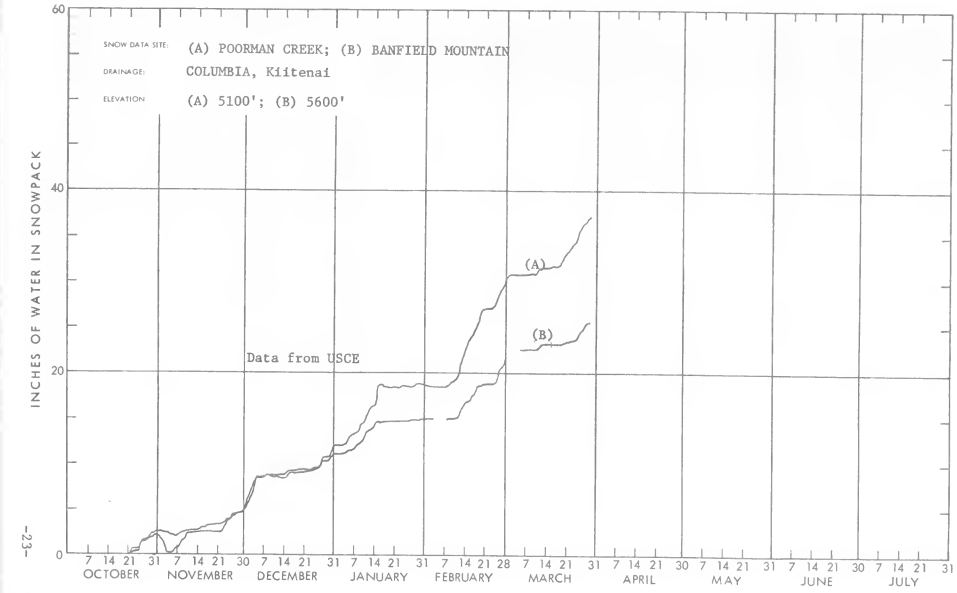
Average based on 1958-72 period. A - Aerial observation; water content estimated.
SP - Snow Pillow observation; water content only.


NOISY BASIN PROFILE
SNOW GAGE
3/29/76
Depth 118 inches
Snow Water Equivalent 34.5 inches
Average Density 27.3%
160
140
120
100
80
60
40
20
0
10
20
30
40
50
% Density

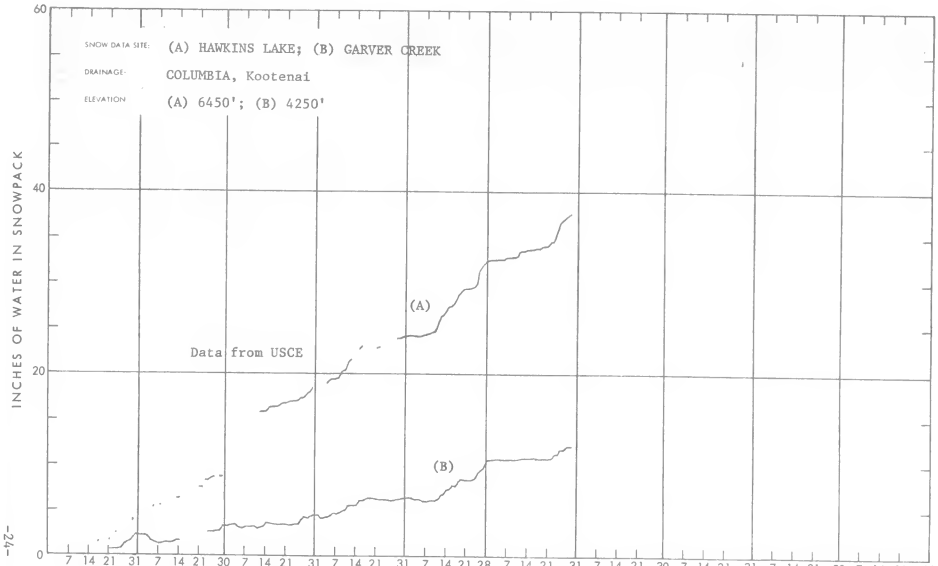
WSF8-X13C


SNOW DATA SITE: (A) STAHL PEAK; (B) GRAVE CREEK
DRAINAGE: COLUMBIA; Kootenai
ELEVATION: (A) 6030'; (B) 4300'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

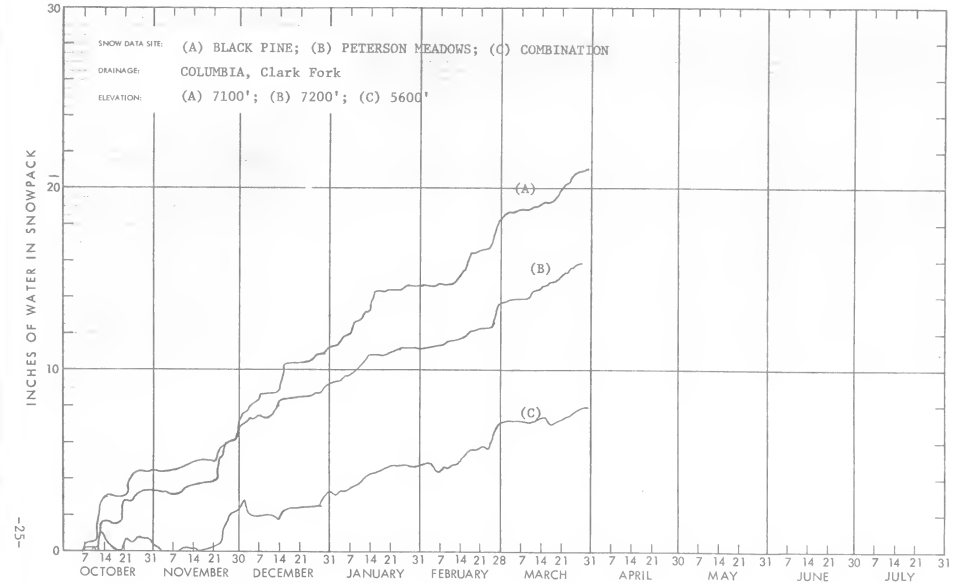
WSFB-X13C


SNOW DATA SITE: (A) POORMAN CREEK; (B) BANFIELD MOUNTAIN
DRAINAGE: COLUMBIA, Kiitenai
ELEVATION (A) 5100'; (B) 5600'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
Data from USCE
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

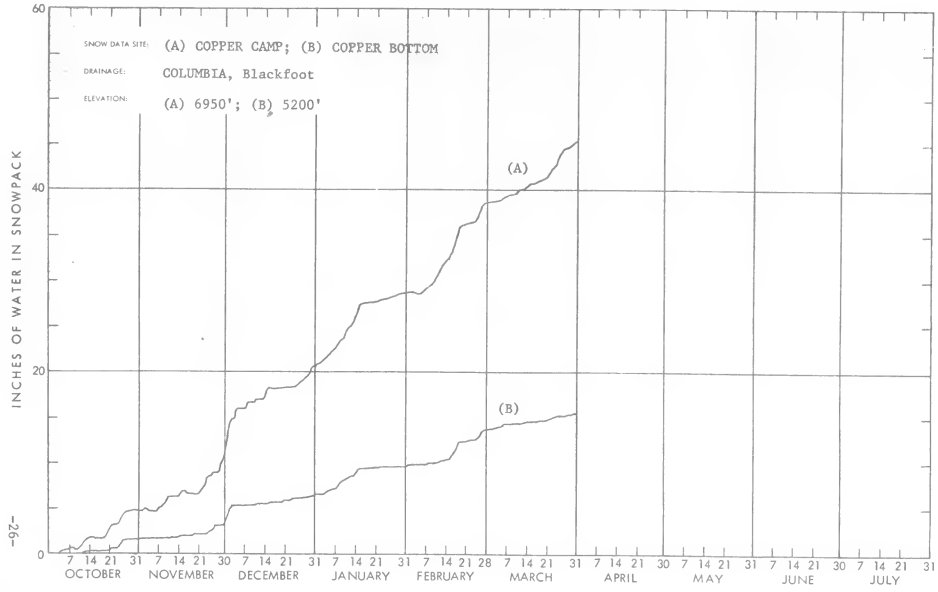
WSFB-K13C


SNOW DATA SITE: (A) HAWKINS LAKE; (B) GARVER CREEK
DRAINAGE: COLUMBIA, Kootenai
ELEVATION: (A) 6450'; (B) 4250'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
Data from USCE
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

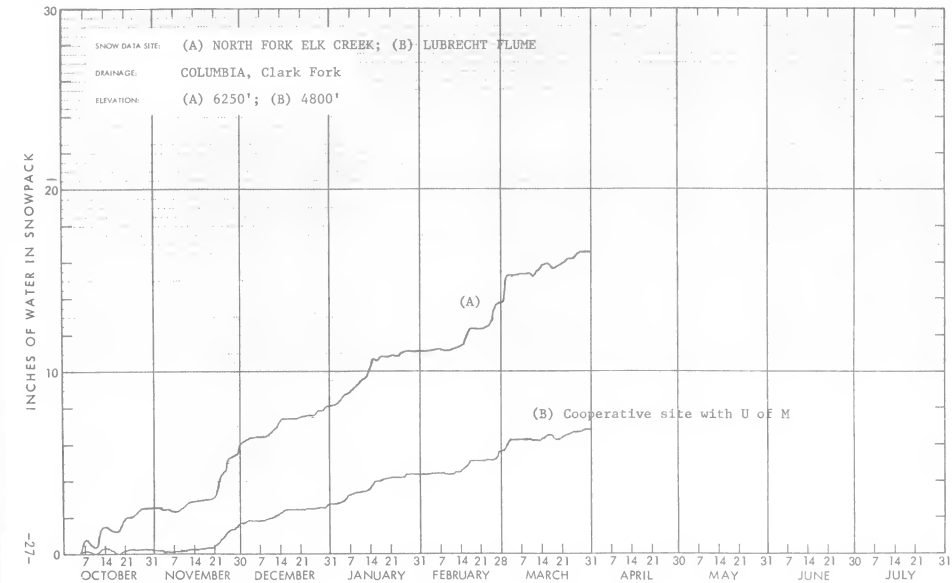
WSFB-X138


SNOW DATA SITE: (A) BLACK PINE; (B) PETERSON MEADOWS; (C) COMBINATION
DRAINAGE: COLUMBIA, Clark Fork
ELEVATION: (A) 7100'; (B) 7200'; (C) 5600'
INCHES OF WATER IN SNOWPACK
30
20
10
0
(A)
(B)
(C)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

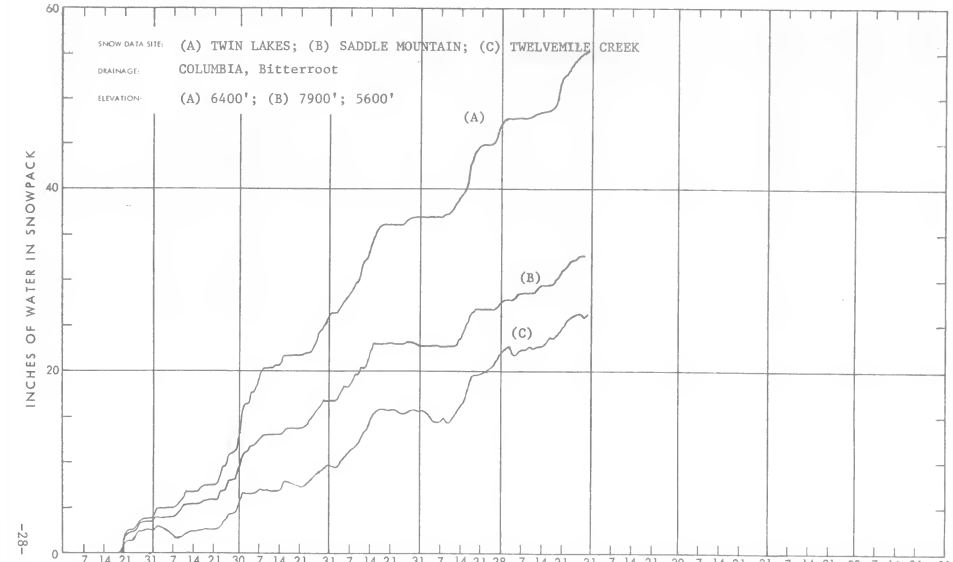
WSFB-X13C


SNOW DATA SITE: (A) COPPER CAMP; (B) COPPER BOTTOM
DRAINAGE: COLUMBIA, Blackfoot
ELEVATION: (A) 6950'; (B) 5200'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

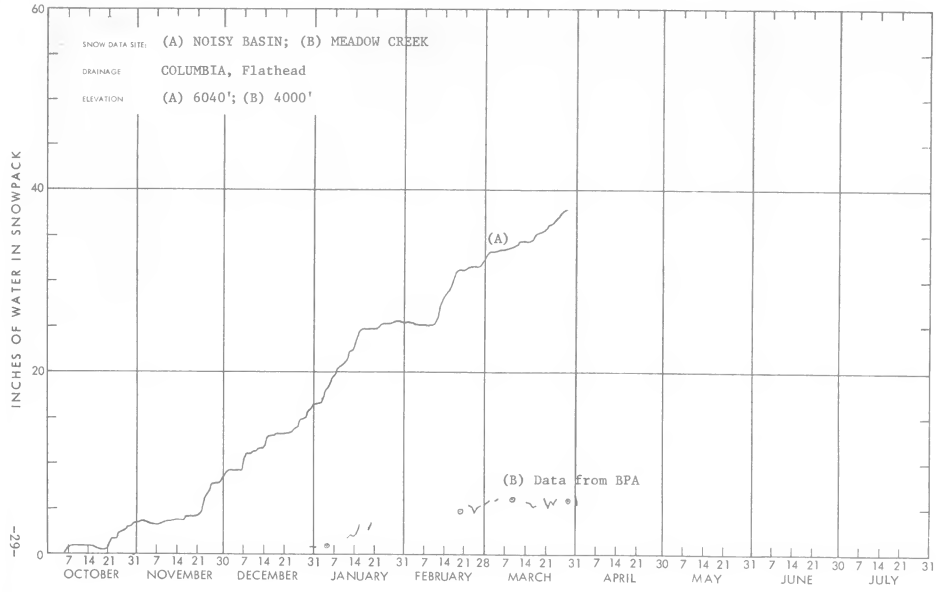
WSFB-X138


SNOW DATA SITE: (A) NORTH FORK ELK CREEK; (B) LUBRECHT FLUME
DRAINAGE: COLUMBIA, Clark Fork
ELEVATION: (A) 6250'; (B) 4800'
INCHES OF WATER IN SNOWPACK
30
20
10
0
(A)
(B) Cooperative site with U of M
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

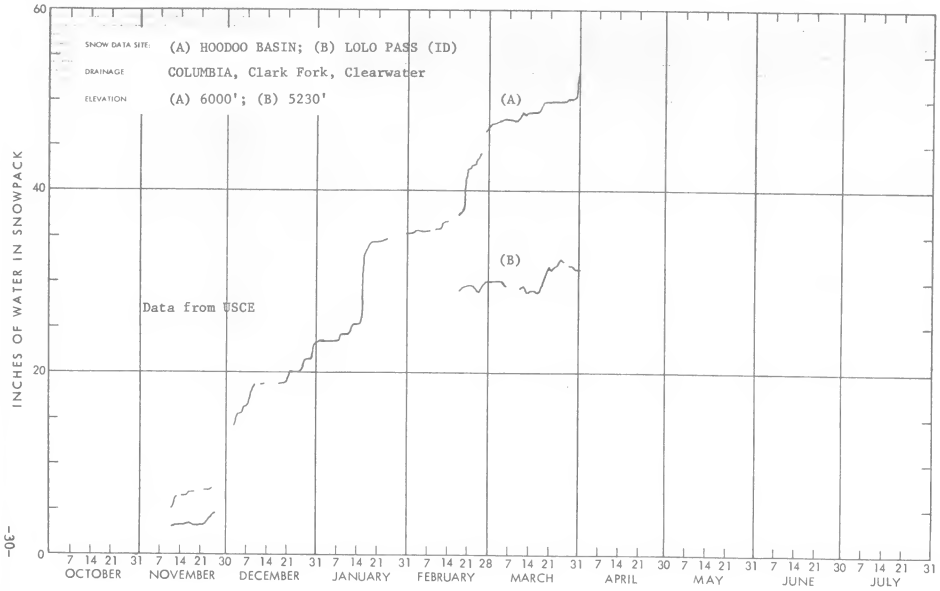
WSFB-X13C


SNOW DATA SITE: (A) TWIN LAKES; (B) SADDLE MOUNTAIN; (C) TWELVEMILE CREEK
DRAINAGE: COLUMBIA, Bitterroot
ELEVATION: (A) 6400'; (B) 7900'; 5600'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
(C)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

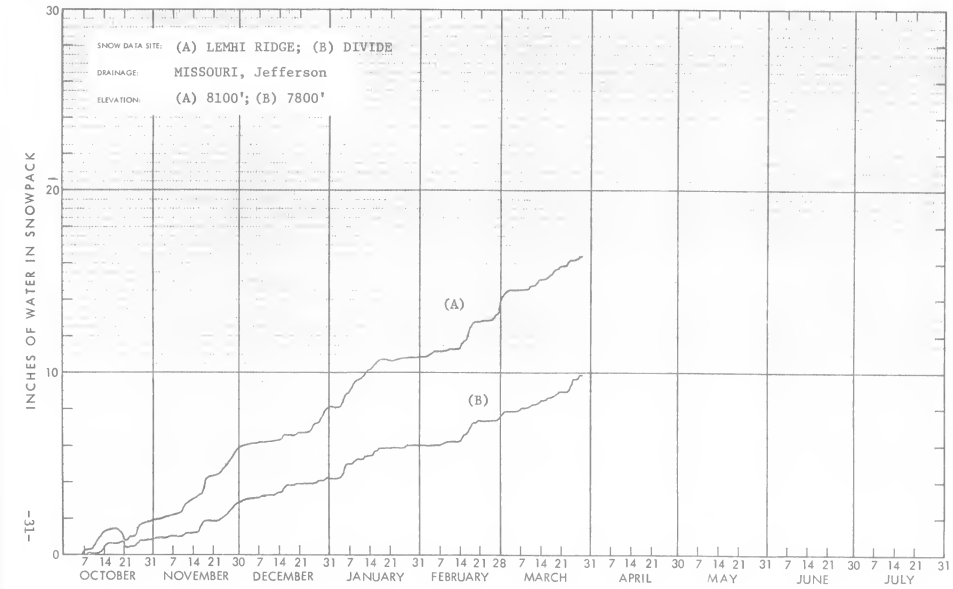
WSFB-X13C


SNOW DATA SITE: (A) NOISY BASIN; (B) MEADOW CREEK
DRAINAGE COLUMBIA, Flathead
ELEVATION (A) 6040'; (B) 4000'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B) Data from BPA
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

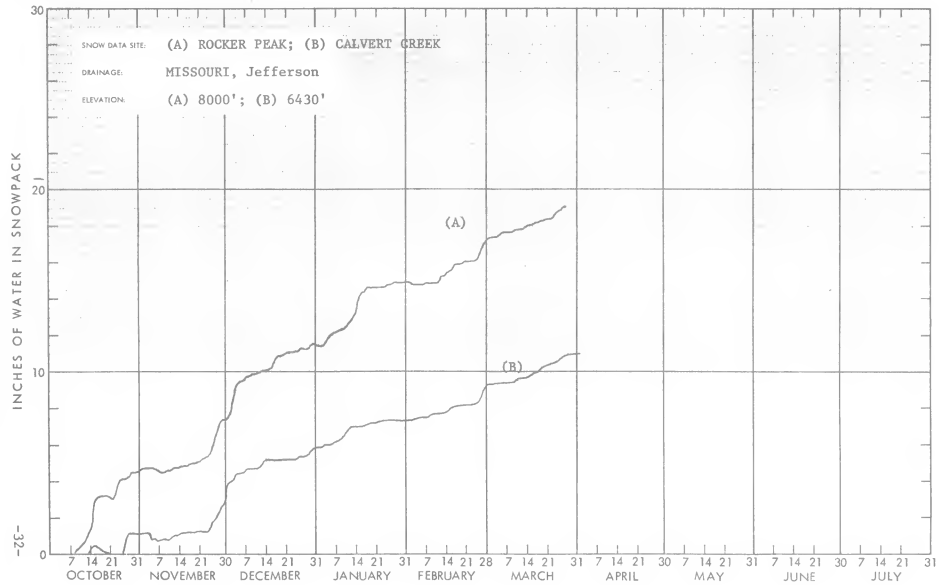
WSFB-X13C


SNOW DATA SITE: (A) HOODOO BASIN; (B) LOLO PASS (ID)
DRAINAGE COLUMBIA, Clark Fork, Clearwater
ELEVATION (A) 6000'; (B) 5230'
(A)
(B)
Data from USCE
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

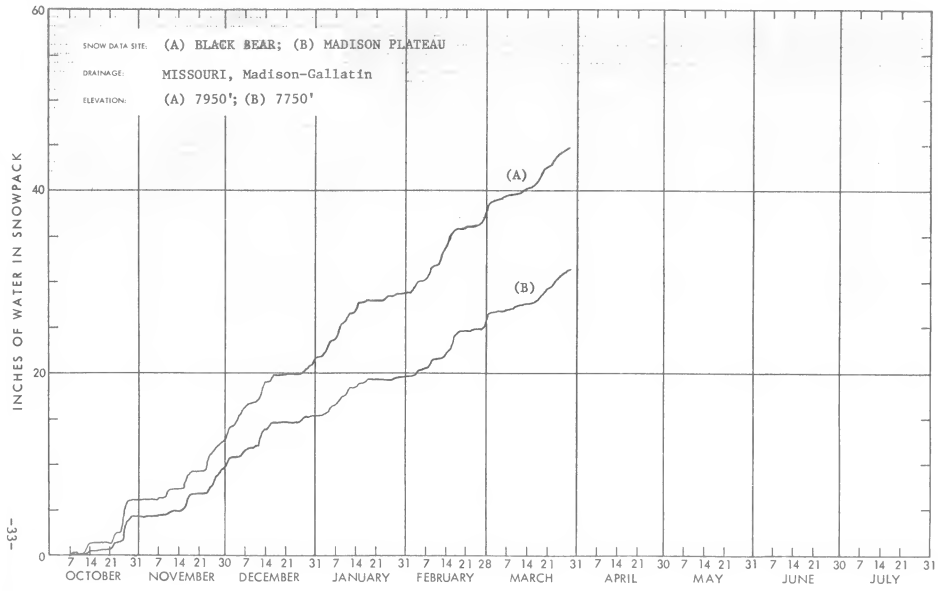
WSFB-X138


SNOW DATA SITE: (A) LEMHI RIDGE; (B) DIVIDE
DRAINAGE: MISSOURI, Jefferson
ELEVATION: (A) 8100'; (B) 7800'
INCHES OF WATER IN SNOWPACK
30
20
10
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

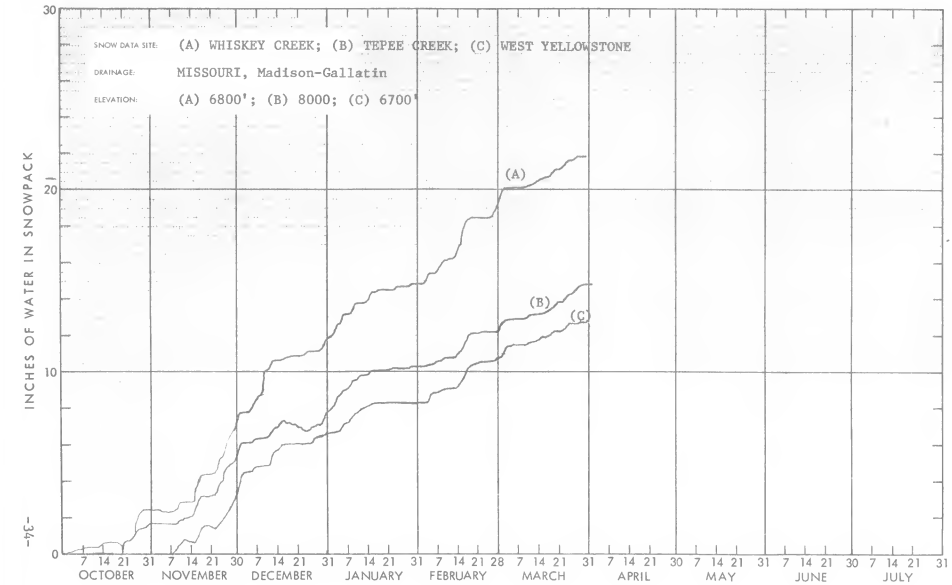
WSFB-X138


SNOW DATA SITE: (A) ROCKER PEAK; (B) CALVERT CREEK
DRAINAGE: MISSOURI, Jefferson
ELEVATION: (A) 8000'; (B) 6430'
INCHES OF WATER IN SNOWPACK
30
20
10
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

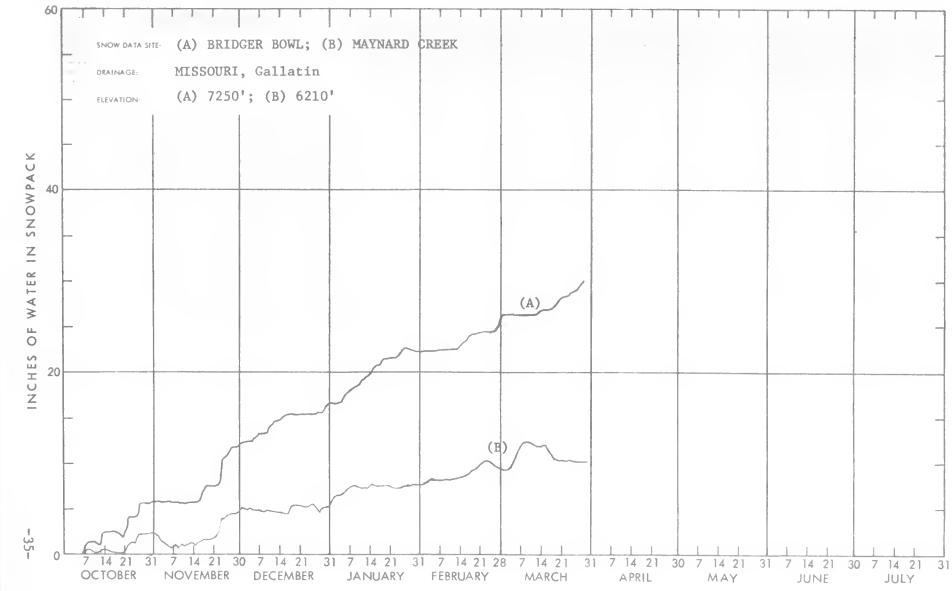
WSFB-X13C


SNOW DATA SITE: (A) BLACK BEAR; (B) MADISON PLATEAU
DRAINAGE: MISSOURI, Madison-Gallatin
ELEVATION: (A) 7950'; (B) 7750'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

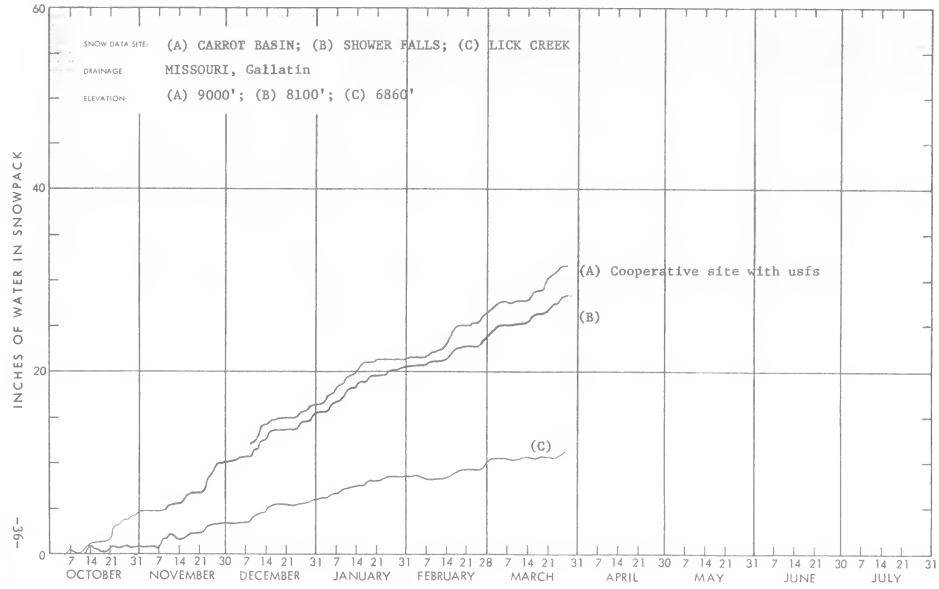
WSFB-X13B


SNOW DATA SITE: (A) WHISKEY CREEK; (B) TEPEE CREEK; (C) WEST YELLOWSTONE
DRAINAGE: MISSOURI, Madison-Gallatin
ELEVATION: (A) 6800'; (B) 8000; (C) 6700'
INCHES OF WATER IN SNOWPACK
30
20
10
0
(A)
(B)
(C)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

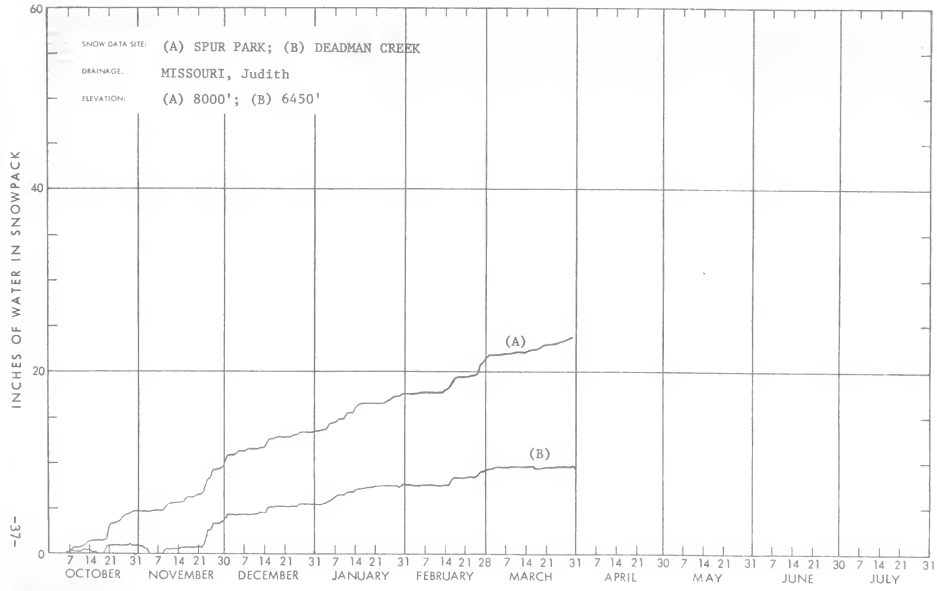
WSFB-X13C

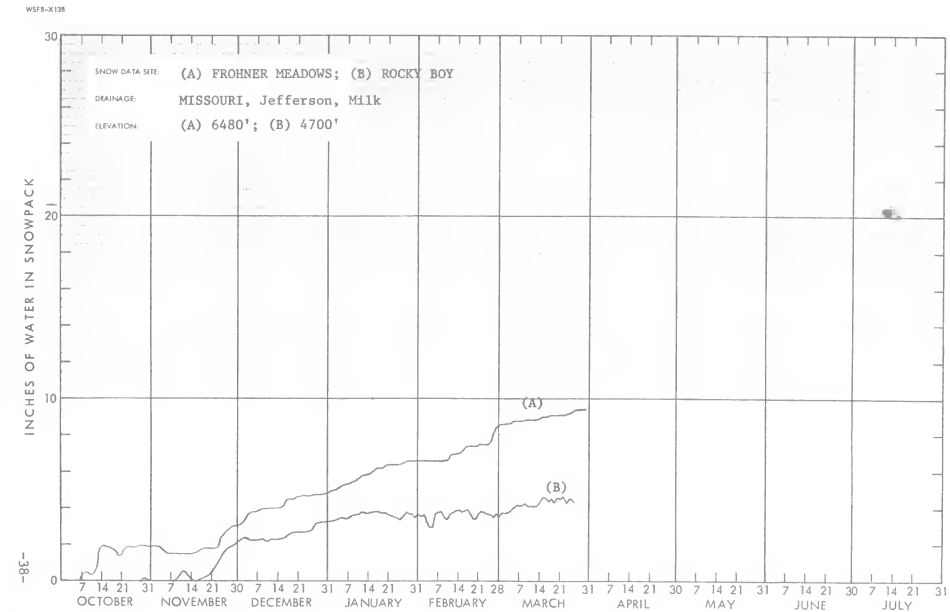

SNOW DATA SITE: (A) BRIDGER BOWL; (B) MAYNARD CREEK
DRAINAGE: MISSOURI, Gallatin
ELEVATION: (A) 7250'; (B) 6210'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

WSFB-X13C

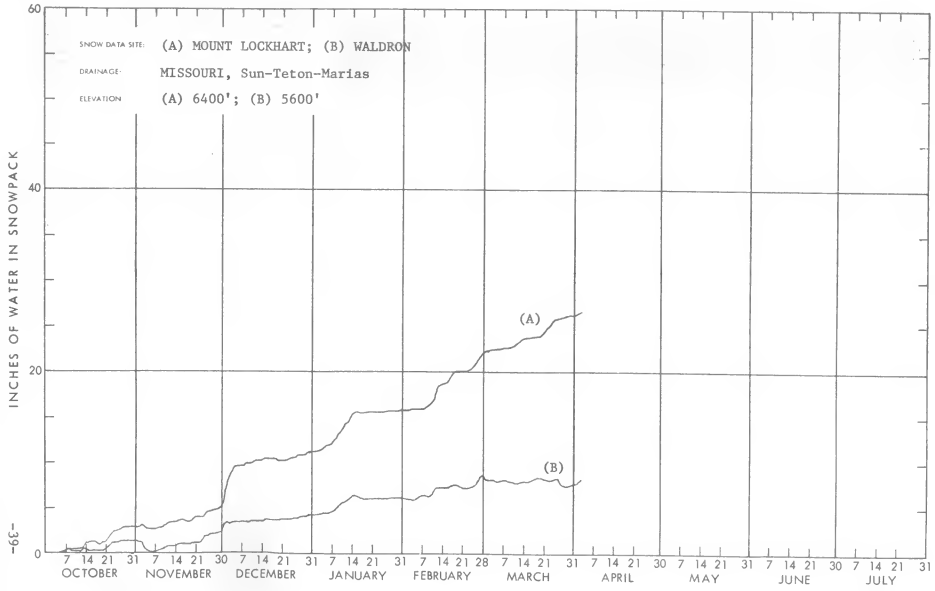

SNOW DATA SITE: (A) CARROT BASIN; (B) SHOWER FALLS; (C) LICK CREEK
DRAINAGE MISSOURI, Gallatin
ELEVATION- (A) 9000'; (B) 8100'; (C) 6860'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A) Cooperative site with usfs
(B)
(C)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

WSFB-X13C

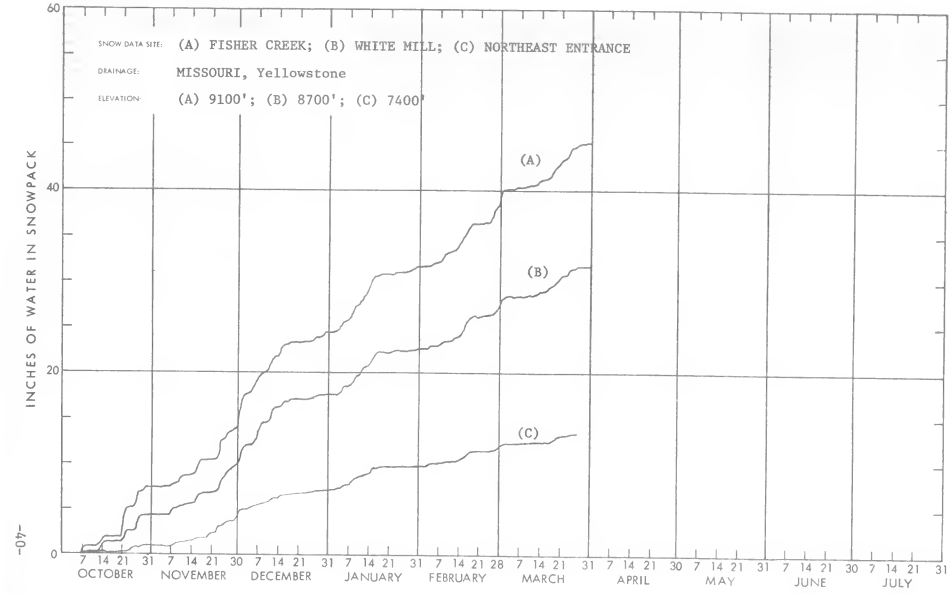

SNOW DATA SITE: (A) SPUR PARK; (B) DEADMAN CREEK
DRAINAGE. MISSOURI, Judith
ELEVATION: (A) 8000'; (B) 6450'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


WSFB-X138
SNOW DATA SITE: (A) FROHNER MEADOWS; (B) ROCKY BOY
DRAINAGE: MISSOURI, Jefferson, Milk
ELEVATION: (A) 6480'; (B) 4700'
INCHES OF WATER IN SNOWPACK
30
20
10
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

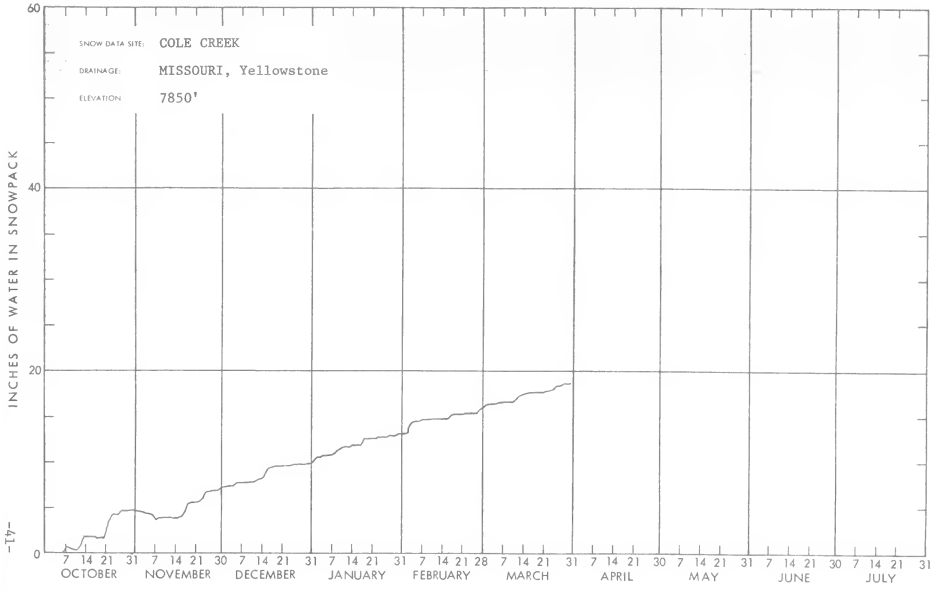
WSFB-X13C

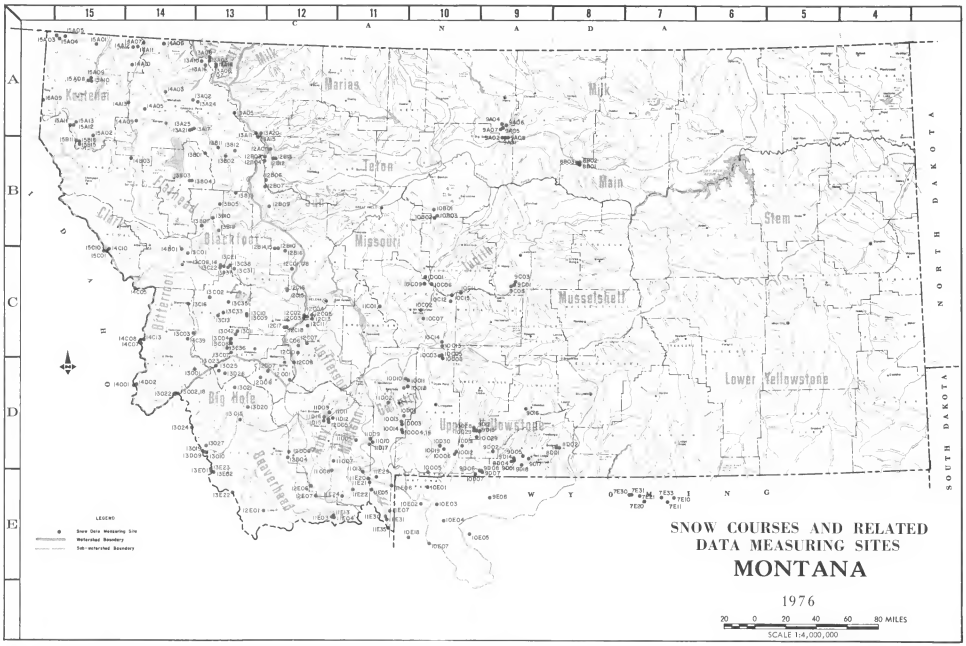

SNOW DATA SITE: (A) MOUNT LOCKHART; (B) WALDRON
DRAINAGE: MISSOURI, Sun-Teton-Marias
ELEVATION (A) 6400'; (B) 5600'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

WSFB-X13C


SNOW DATA SITE: (A) FISHER CREEK; (B) WHITE MILL; (C) NORTHEAST ENTRANCE
DRAINAGE: MISSOURI, Yellowstone
ELEVATION: (A) 9100'; (B) 8700'; (C) 7400'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
(C)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

WSFB-X13C


SNOW DATA SITE: COLE CREEK
DRAINAGE: MISSOURI, Yellowstone
ELEVATION: 7850'
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


CANADA
NORTH DAKOTA
SOUTH DAKOTA
WYOMING
Kootenai
Marias
Milk
Teton
Main Stem
Blackfoot
Missouri
Little Missouri
Musselshell
Lower Yellowstone
Big Hole
Upper Yellowstone
Beaverhead
LEGEND
Snow Data Measuring Site
Watershed Boundary
Sub-watershed Boundary
SNOW COURSES AND RELATED DATA MEASURING SITES
MONTANA
1976
20 0 20 40 60 80 MILES
SCALE 1:4,000,000

INDEX to MONTANA SNOW COURSES and DATA SITES

SNOW COURSES

COLUMBIA RIVER BASIN

KOOTENAI RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Bald Eagle Peak	15411	5700	4	27N	31W	1,3,4,5,9&10		1
Barron Creek-Mountain	15412	5400	4	28N	31W	1,3,4,5,9&10		1
Berne Creek	15611	5350	34	26N	31W	1,4,5,9&		2
Berne Midway	15614	4600	31	26N	30W	1,4,5,9&		2
Berne Trail	15613	5850	5	25N	30W	1,4,5,9&		2
Brimmer Creek	15410	5900	2	32N	29W	1,3,4,5,9&10		1
Bull River-Upper Junior	15414	6100	2	32N	30W	1,3,4,5,9&10		1,3
Cedar Creek	15413	6100	35	29N	31W	1,3,4,5,9&10		1
Dorris Creek	15606	5600	20	27N	33W	1,3,4,5,9&10		1
Garnet Creek	15605	5425	36	27N	32W	1,3,4,5,9&10		1
Grave Creek	15611	4300	1	24N	29W	1,3,4,5,9&		1
Keeler Creek	15610	4600	1	24N	30W	1,3,4,5,9&		1
Keeler Creek	16609	7500	25	30N	31W	1,3,4,5,9&		1
Lost Bowl	15609	4800	31	33N	29W	1,3,4,5,9&		1
Murphy Lake S. R.	16610	7400	5	31N	29W	1,3,4,5,9&	H,WSC	1
Pinaroan Creek	15612	5100	1	24N	31W	1,3,4,5,9&		1
Pinkham	15614	5500	5	26N	31W	1,3,4,5,9&	WSC	2
Red Mountain	15611	6000	4	34N	31W	1,3,4,5,9&		1
Stahl Peak	15612	6050	3	36N	31W	1,3,4,5,9&		1
Wanetzi Divide	15607	5450	26	37N	26W	1,3,4,5,9&10		1

FLATHEAD RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Beaver Peak	16803	5150	11	24N	21W	3,4,5		3
Big Creek	16805	4600	1	22N	20W	3,4,5		3
Big Creek	17805	4750	7	22N	19W	3,4,5, 6	1,5	
Camp Misery	15617	6400	30	28N	18W	3,4,5	1,2	
Desert Mountain	15602	5600	24	31N	19W	1,3,4,5, 6	1,5	
Dewey Creek	15624	4150	20	31N	18W	3,4,5		
Fisher River	16804	4700	1	23N	25W	3,4,5	1,5	
Fleming Mountain	15619	6300	12	29N	19W	3,4,5	1,5	
Griffin Creek Divide	16608	5110	11	38N	25W	3,4,5		
Granight Lake	15803	4300	28	26N	19W	3,4,5		
Hell Roaring Divide	16603	5750	28	32N	23W	1,3,4,5,9&10		
Hog Heaven	15618	6100	30	30N	19W	3,4,5	A	
Kishenehn	16604	3880	14	37N	21W	3,4,5		
Logan Creek	16603	4300	34	30N	24W	3,4,5	1,2	
Moran Creek	16605	4500	1	31N	23W	3,4,5		
Nasukoin Lake	16615	6060	23	28N	20W	3,4,5	1,2	
Nolan Creek	15621	5600	33	28N	19W	3,4,5	1,2	
North Fork Jocko	17807	4350	7	17N	21W	1,3,4,5,9&10	1,5	
Spotted Bear Mountain	13802	5800	25	25N	19W	4,5	1,3,4,5	1
Stahl Peak	15612	6050	3	36N	31W	3,4,5	1,5	
Twin Creeks	17811	3160	25	24N	21W	3,4,5	1,2,5	
Upper Holland Lake	13805	4300	28	20N	15W	3,4,5		

CLARK FORK RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Black Pine	13613	7000	36	8N	19W	1,3,4,5,9&10	1	
Combination	15615	3600	7	8N	14W	1,3,4,5,9&10		
Copper Butte	12614	5200	1	15N	15W	4,5	1,2	
Copper Camp	12614	4950	1	15N	15W	3,4,5	1,2	
Copper Creek	12613	6100	3	14N	15W	3,4,5	1,2	
Copper Lake Creek	13613	6100	3	11N	15W	3,4,5	1,2	
Cottonwood Creek	12617	6400	16	7N	8W	3,4	2	
Crazy Hill	17610	6200	22	10N	13W	1,3,4,5,9&	1	
Discovery Basin	13542	7350	31	6N	13W	1,3,4,5,9&		
Dry Fork	13613	6100	1	9N	19W	1,3,4,5,9&10	11	
El Dorado Mine	13609	7800	23	8N	15W	1,3,4,5,9&10		
Fred Burr Basin	13611	8000	18	6N	13W	3,4,5		
Gold Creek Lake	15618	7200	1	10N	14W	3,4,5		
Heavy Lake Trail	16610	6800	11	14N	17W	3,4,5		
Hoodoo Basin	13611	6100	1	11N	15W	1,3,4,5,9&10		
Hoodoo Creek	13608	5900	26	14N	15W	1,3,4,5,9&10		
Interguard	13536	6450	6	5N	15W	1,3,4,5	4	
Lower Graves Creek	13609	6100	1	8N	15W	Monthly	5	
Lunchatz Forest	15614	6100	11	15N	14W	Monthly	8	
Lunchatz Flume	15738	6680	13	13N	14W	1,2,3,4,5	8	
Lunchatz Forest No. 2	15613	5450	19	13N	14W	1,2,3,4,5	8	
Lunchatz Forest No. 4	15722	6450	33	13N	15W	1,2,3,4,5	8	
Lunchatz Forest No. 5	15722	6100	33	13N	15W	1,2,3,4,5	8	
Lunchatz Hotsplat	15677	6200	10	13N	14W	1,2,3,4,5	8	
Marsh Fork Elk Creek	15711	6250	28	13N	15W	1,2,3,4,5,9&10	8	
Opitz Park	15616	7150	13	11N	14W	1,3,4,5,9&10	11	
Petersen Meadows	13536	7200	3	6N	16W	1,3,4,5,9	3	
Rock Creek No. 2	13611	6100	1	6N	13W	Monthly	5	
Shelaine Summit	15615	7260	35	8N	17W	3,4,5,9&	1	
Slide Rock Mountain	15603	7100	35	10N	16W	3,4,5	1	
Snake Lake	15607	7780	19	6N	15W	1,3,4,5,9&		
Stuart Mill	15536	4930	19	5N	15W	2,3,4	4	
Sunset Mountain	15615	6600	7	9N	14W	1,3,4,5,9&10		
Superior	12618	7350	13	16N	14W	3,4,5	1,2	
TT Mountain	14801	6800	33	19N	19W	1,3,4,5,9&10	8	

BITTERROOT RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Ambrose	15014	6680	28	9S	18W	3,4,5		1
Daly Creek	15039	7180	14	8S	19W	3,4,5	F	1
East Fork R. R.	15901	7600	16	2S	17W	3,4	1	
Gibbons Pass	15901	7200	4	3S	19W	1,2,3,4,5,9&	1,3	
Lolo Pass	14903	5250	11	10N	24W	1,2,3,4,5	1,2	
Mill Creek	15038	7000	1	8S	19W	1,3,4,5,9&	1	
Nez Perce Camp	14902	5180	13	9N	23W	3,4,5	1	
Nez Perce Pass	14901	6570	15	10	24W	3,4,5		
Saddle Mountain	15022	7940	5	2S	19W	1,2,3,4,5,9&		
Twelvemile Creek	14715	5650	34	9N	23W	1,2,3,4,5,9&		
Twin Lakes	14706	6150	32	5N	23W	1,2,3,4,5,9&		

HUDSON BAY BASIN

ST. MARY RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Iceberg Lake No. 3	15603	5600	1	33N	17W		5	3,9
Josephine Lower No. 9	13616	4900	22	33N	16W		5	3,9
Mount Allen No. 7	15607	5100	7	35N	16W		5	3,9
Piegan Pass No. 4	13604	5500	27	35N	16W		5	3,9
Pinnacles No. 8	13608	6050	26	36N	17W		5	3,9

1956-A-SCP-2400 5555 1171 MO-OL-22024

MISSOURI RIVER BASIN

BEAVERHEAD RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Bloody Dick	13916	7400	12	8S	14W	3,4,5		1
Bloody Dick	13916	7400	12	8S	14W	3,4,5		1
Cherkaneus Ranch	13906	6050	34	7S	7W	Monthly	11	
Red Creek Lake	13923	8400	24	12S	13W	3,4,5	1	
Elk Horn Springs	13913	7850	27	6S	13W	3,4,5	5	
Gold Stone	13909	8100	11	8S	15W	3,4,5	1	
Grasshopper	13914	6700	23	11S	9W	Monthly	11	H,WSC
Laboratory Canyon	13934	6950	24	14S	7W	1,2,3,4,5	10	
Laboratory Ridge	13925	7400	27	14S	8W	1,2,3,4,5	10	
Lemhi Pass	13935	7600	31	17S	15W	3,4	1	
Lemhi Ridge	13923	8000	10	14S	15W	3,4	1	
Lost Trail Pass	13933	7000	1	16S	19W	3,4,5	1	
White Pine Ridge	12915	8850	10	14S	9W	3,4,5	1	

RUBY RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Brandner Lakes	11914	8850	5	12S	12W	3,4,5	1,10	
Clover Meadow	11908	8100	5	9S	2W	3,4,5	1	
Divide	10907	7800	15	12S	6W	3,4,5	1	
Hidden Hill Creek	11913	7850	27	6S	3W	3,4,5	1,10	
Hitch	12004	8300	18	11S	4W	3,4,5	1	
Snowglider Mine	10909	6960	34	4S	4W	3,4,5	1,10	

BIG HOLE RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Ahrendsen Lake	13930	8800	7	3S	11W	3,4,5	1	
Bull Mountain	13908	7500	5	1S	15W	1,2,3,4,5	7	
Calvert Creek	13924	6650	34	2N	14W	3,4,5		
Fleecer Lake	13907	8400	18	2S	14W	3,4,5	1,5	
Fleecer Ridge	13907	8600	18	2S	14W	1,2,3,4,5	2	
Foolhen	13921	8080	11	1S	13W	3,4,5	1	
Johnson Lake Trail	13927	7200	34	7S	14W	3,4,5	1	
Mudd Lake	13925	7450	36	2S	15W	3,4,5	1	
Red Mountain	13926	8100	1	3S	14W	3,4,5	1	
Stygala-Nelk Lake	13924	8750	29	1S	17W	3,4,5	1	

JEFFERSON RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Berry Meadow	12207	7000	8	3S	7W	3,4	1	
Fleecer Mountain	13907	8600	18	2S	14W	1,2,3,4,5	2	
Pea Patch Creek	13918	7000	16	4S	6W	1,2,4,5	4	
Pioneer Cemetery	12106	6500	21	5N	4W	2,3,4	6	
Pipestone Pass	12705	7200	10	1S	7W	1,2,3,4,5	1	
Rocker Peak	12011	8000	17	7N	5W	1,2,3,4,5	1	

MADISON RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Black Bear	11855	7950	27	15S	8W	1,2,3,4,5,9&	1,3	
Cell Road	11911	7000	3	6S	2W	3,4,5	1	
Four Mile	11913	6800	3	6S	3W	3,4,5	1	
Hebgen Lake	11908	6750	26	9S	5W	1,2,3,4,5	1	
Lake Creek	11903	7200	34	10S	5W	3,4,5	1	
Lake Creek	11922	6300	27	11S	1E	2,3,4,5	1,2	
Lower Timber	11911	6600	3	6S	3W	3,4,5	1	
Madison Plateau	11923	7500	26	12S	1E	1,2,3,4,5	1	
Meadow Creek	11908	7300	26	9S	5W	1,2,3,4,5,9&	1,2	
Meadow Creek	11908	7300	26	9S	5W	3,4,5	1	
Sentinel Creek	11920	8500	17	10S	3E	3,4,5	2	
Taylor	11911	6600	3	6S	3W	3,4,5	1	
Two Dot Lookout	11910	7600	34	5S	3E	1,2,3,4,5	1,5,6	
Whiskey Creek	11930	6850	19	14S	3E	1,2,3,4,5,9&	2	

GALLATIN RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Arch Valley	10924	7250	3	5S	4E	1,2,3,4,5,9&	1	
Beaver Creek	11909	8150	9	6S	5E	3,4,5	1	
Big Sky	11917	7750	30	6S	3E	3,4,5	1	
Bridger Bowl	10915	7250	25	1S	6E	1,2,3,4,5,9&	1	
Buck Ridge	10914	8400	18	1S	5E	1,2,3,4,5	1	
Cottonwood Creek	10923	7450	18	5S	4E	Monthly	1	H,WSC
Gentle Bride	10906	8100	19	3S	6E	1,2,3,4,5,9&	1	
Hood Meadow	10915	7400	19	1S	6E	1,2,3,4,5,9&	1	
Lick Creek	10913	6850	10	4S	4E	1,2,3,4,5,9&	1	
Lick Creek	10913	6850	10	4S	4E	3,4,5	1	
Maynard Creek	10918	6210	14	7S	3E	1,2,3,4,5,9&	1	
New World	10901	8700	26	5S	6E	2,3,4,5	1	
Shower Falls	10916	8380	10	2S	3E	1,2,3,4,5,9&	1	
Taylor Peaks	11913	8300	24	9S	2E	3,4,5	1	
Twenty-One Mile	11906	7150	1	11S	5E	1,2,3,4,5	1	

MISSOURI RIVER MAIN STEM

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Big Snowie	14903	5180	10	19N	9E	1,2,4,5	1,12	
Bluebird Mountain	11905	7950	7	9S	5E	3,4,5	1	
Bozeman Basaltic	12905	6200	3	2S	5W	1,2,3,4,5	5	
Bozeman Creek	12909	6450	25	2S	5E	1,2,3,4,5,9&	1	H,P
Elk Park	10907	8600	10	8S	6E	3,4,5	1	
Flesher Meadows	14902	5600	10	20N	8E	1,2,4,5	1	
Grasshopper	13902	7000	15	19N	9E	3,4,5	1	
Highwood Divide	14902	5650	16	19N	9E	1,2,3,4,5	1,12	
Highwood Station	13901	4600	20	20N	9E	1,2,3,4,5	1,12	
Kings Hill	14001	7500	36	13N	8E	3,4,5,9&	1,3	
Sheep Creek	12905	6600	12	2S	5E	3,4,5	1	
Two Mile Lower	12905	6450	12	2S	5E	1,2,3,4,5	1	
Two Mile Middle	12903	6800	15	2S	6W	1,2,3,4,5	1	
Two Mile Upper	12904	8000	15	2S	6W	1,2,3,4,5	1	

TETON - MARIAS RIVERS

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Badger Pass	13415	6900	4	27N	11W	A	1,2,3,4,5	1
Bear Creek	13414	6700	4	27N	11W	A	1,2,3,4,5	1
Cain Creek	12826	5150	23	23N	10W		3,4,5	1
Pine-Dell	12919	5700	25	28N	10W		3,4,5	1
Pinkgim Creek	13426	5700	23	23N	11W		3,4,5	1
Post Mountain	12907	7000	20	29N	10W		3,4,5	1,3
Rocky Mountain	13412	6400	18	29N	11W	H,WSC	1,2,3,4,5	1
Round Landmark	12912	5600	18	22N	9W	H,P	1,2,3,4,5,9&	1
Valdron	12913	5600	17	22N	9W	H,P	1,2,3,4,5,9&	1
Wrong Creek	13926	5700	32	25N	9W		3,4,5	1
Wrong Ridge	13923	6800	17	25N	10W		3,4,5	2

JUDITH RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Big Snowy	9005	7150	25	12N	17E		3,4,5	1
Crystal Lake	9011	6300	18	12N	16E		3,4,5	1
North Creek	9008	6600	1	12N	15E		3,4,5	1
Rex Park	13006	8100	20	12N	19E	H,P	1,2,3,4,5,9&	1
Wilcox Summit	9006	7700	17	13N	18E	H,WSC	Monthly	11

MUSSELSHELL RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Delay Park	10C15	7690	34	11N	11E		3,4,5	2
Eagle Creek	10C16	7400	34	9N	10E		3,4,5	2
Lennep	10C14	6400	26	6N	10E		3,4,5	2
Monument	10C11	6900	16	11N	12E		3,4,5	2
Johnson Park	10C12	6450	16	10N	11E		3,4,5	2

MILK RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Beaver Creek	9a25	3950	21	29N	14E	H,WSC	Monthly	1,7
Deer Tee Pee Area	9a02	5200	21	26N	14E	P	1,2,3,4,5	1,7
Hawaiker Creek	9a04	5100	26	28N	14E	P	1,2,3,4,5	1,7
Hays Creek	9a03	4600	1	27N	14E		1,2,3,4,5	1
King Springs	9a05	5100	4	29N	14E		1,2,3,4,5	1
Klusmire Camp	9a04	5720	9	29N	14E	P,H,I	1,2,3,4,5	1,7
Mission Mountain	9a01	6700	23	30N	14E	P,H,I	1,2,3,4,5	1,7
Rocky Creek	9a06	6750	22	28N	14E	H,P,M	1,2,3,4,5	1,7
Sweetgrass Hills	9a07	8150	19	36N	14E	P	1,2,3,4,5	1,7
Taylor Road	9a07	6060	19	29N	14E	P	1,2,3,4,5	1,7

UPPER YELLOWSTONE RIVER

Drainage Basin & Snow Course	Number	Elev.	Exp.	Topo.	Range	Seasons in Addition to Snow Courses 1/	Measuring Dates 2/	Hwng. By 3/
Bald Ridge	10C05	7580	11	6N	10E		3,4,5	1
Bear Trap	10C04	7200	11	7N	11E	H	1,2,3,4,5	1
Bone Gulch	10C08	7530	31	7S	11E		3,4,5	1
Box Canyon	10C31	6700	36	6S	12E		3,4,5	1
Brewer Meadow	10C35	7000	5	9S	14E	P,WSC	Seasonally	5
Camp Sacajawea	9001	7690	2	8S	16E		1,2,3,4,5,9&	1
Cinnabar Mtn.	9002	7600	36	7S	15E	H,P	1,2,3,4,5,9&	1
Collier Creek	10C09	6700	22	8S	11E		3,4,5	1
Cooke Station	9007	8150	19	9S	15E		1,2,3,4,5,9&	1,2
Crystal Creek	10C08	7000	1	7S	11E		3,4,5	1
Flesher Creek	10C03	7600	15	9N	10E	H,P	1,2,3,4,5	1
Grizzly Peak	9005	8400	24	7S	17E		1,2,3,4,5	1,2
Independence	10006	7630	31	7S	12E		3,4,5	1
Mill Creek	10019	7500	8	7S	11E	P	3,4,5	3
Northeast Entrance	10C01	7000	36	9N	11E		3,4,5	1
Northwest Entrance	10007	7600	35	9N	14E	H,P,M	1,2,3,4,5,9&	1
Picket Pin Lower	9013	8100	1	9S	14E	P	1,2,3,4,5	13
Picket Pin Middle	9012	7700	1	9S	14E	P	1,2,3,4,5	13
Picket Pin Upper	11008	8100	32	8S	14E	P	1,2,3,4,5	13
Pine Creek	9004	6600	1	6S	11E	P,H,WSC	1,2,3,4,5	1
PNC Headquarters	8001	5700	1	6S	10E	P	Daily	1
Porcupine	10C05	6100	18	6N	10E	H,P	3,4,5	1
Sacajawea	10C06	7200	28	8S	16E		3,4,5	1
Silver Run	9018	6450	11	8S	17E	H,P	3,4,5	1
Slough Creek	9009	7000	1	7S	14E	P	1,2,3,4,5	1
Timberline Creek	9006	8100	12	8S	15E	H,P	1,2,3,4,5	1
West Rosebud	9002	7580	9	7S	14E		3,4	4
White Mill	9006	8700	16	7S	15E	H,P	1,2,3,4,5,9&	1
Willow Creek	9017	6300	91	7S	20E		1,2,3,4,5	1,2

LEGEND

1/ Blank refers to snow course only at site
P = snow pillow site
P = precipitation gage also
M = soil moisture gage also
T = maximum temperature also
I = air temp. also
A = aerial marker also
WSC = no snow course at site

2/ Numerals refer to agency making the snow survey as follows:

1. Soil Conservation Service
2. Forest Service
3. Geological Survey
4. Fish and Game Commission
5. Bureau of Indian Affairs
6. National Park Service
7. NOAA Agricultural Experiment Station
8. University of Montana School of Forestry
9. Department of Energy, Mines and Resources
10. Montana Department of Fisheries and Wildlife
11. Private Cooperator
12. Montana Association of Conservation Districts
13. Montana Department of Fish and Game

3/ Numerals refer to agency making the snow readings as follows:

1. Soil Conservation Service
2. Forest Service
3. Geological Survey
4. Fish and Game Commission
5. Bureau of Indian Affairs
6. National Park Service
7. NOAA Agricultural Experiment Station
8. University of Montana School of Forestry
9. Department of Energy, Mines and Resources
10. Montana Department of Fisheries and Wildlife
11. Private Cooperator
12. Montana Association of Conservation Districts
13. Montana Department of Fish and Game

Daily = Daily readings, most precipitation gages and soil moisture are read monthly.

Seasonally = Seasonally readings, most precipitation gages and soil moisture are read monthly.

4/ Numerals refer to agency making the snow surveys as follows:

1. Soil Conservation Service
2. Forest Service
3. Geological Survey
4. Fish and Game Commission
5. Bureau of Indian Affairs
6. National Park Service
7. NOAA Agricultural Experiment Station
8. University of Montana School of Forestry
9. Department of Energy, Mines and Resources
10. Montana Department of Fisheries and Wildlife
11. Private Cooperator
12. Montana Association of Conservation Districts
13. Montana Department of Fish and Game

Agencies and Organizations Cooperating in Montana Snow Surveys

GOVERNMENT AGENCIES

Canada:

Water Survey of Canada, Calgary, Department of the Environment
Water Resources Service, Department of Lands, Forests and Water Resources, British Columbia

Federal:

Department of the Army
  Corps of Engineers
U.S. Department of Agriculture
  Forest Service
  Soil Conservation Service
U.S. Department of Commerce
  NOAA, National Weather Service
U.S. Department of the Interior
  Bonneville Power Administration
  Bureau of Indian Affairs
  Bureau of Reclamation
  Fish and Wildlife Service
  Geological Survey
  National Park Service

STATE

Montana Association of Conservation Districts
Montana Department of Fish and Game
Montana Department of Natural Resources and Conservation
Montana State University - Agricultural Experiment Station
University of Montana - School of Forestry

PRIVATE

Montana Power Company

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
P.O. Box 98
Bozeman, Montana 59715

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF
AGRICULTURE
AGR-101

U.S. MAIL

FIRST CLASS MAIL

FEDERAL - STATE - PRIVATE

COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"The Conservation of Water begins with the Snow Survey"

DOCUMENT DISTRIBUTION CENTER
MONTANA STATE LIBRARY
930 EAST LYNDALE AVENUE
HELENA, MT. 59601